

No. 3108.

United States
Circuit Court of Appeals,
FOR THE NINTH CIRCUIT.

George J. Henry, Jr.,

Appellant,

vs.

City of Los Angeles,

Appellee.

APPELLEE'S BRIEF.

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APPELLEE'S BRIEF.

A reading of the brief filed on behalf of appellant leaves the impression that appellant intends the court to understand that the public has received great benefit from the alleged invention of Mr. Lyndon. Such brief apparently attempts to assert that the Lyndon invention has some place in the art. In fact, on page 2 of the brief, it is said:

"The invention covered by the patent in suit, has been epochal in its effect upon industrial and domestic lighting, heating and cooking, and more particularly so upon the Pacific Coast of the United States, where electro-mechanical energy is generated from the streams having their sources high in the Sierras."

There is no evidence whatever upon which to sustain this statement. On the contrary it is admitted that no device embodying the construction or interrelation of parts set forth in the drawings or described in the specification of the Lyndon patent has ever been made. No such device has ever been used. In no manner is the public actually indebted in the slightest degree to Mr. Lyndon. The Lyndon patent is shown by the record clearly to be a mere paper conception. *The proofs show that from the date of the issuing of the patent in suit, March 11, 1902, until August, 1913,—a period of over eleven years,—not a single device made in accordance with the patent was ever assembled or attempted to be used.*

On cross-examination appellant, testifying in his own behalf, says:

“Q. 185. Now, had any of the installations with which you had anything to do involved governing mechanisms substantially like the means disclosed and described in the Lyndon patent in suit?

A. I think I have already answered that question.

Q. 186. In a broad and general way you have. Perhaps I should make it more specific. Have you ever installed in the course of your engineering experience a governing device which corresponded in all details of construction to that disclosed and shown in the Lyndon patent in suit?

A. No, sir.

Q. 187. Did you ever know of anyone installing a governing device built in exact accordance with the

specifications and drawings of the Lyndon patent in suit?

A. No, sir.

Q. 188. Did you ever know of the installation of a governing device employing a dynamo as shown in this patent in connection with magnets like those shown in 15 and 16, and the solenoid like that shown at 33, and also a magnet like that shown at 32 and at 64, with their connections?

A. As far as your question goes, I might say that I have seen governing devices containing the elements as you have described them. But such governing devices were not in use on water wheel apparatus. The method of using voltage variations as shown in dynamo 8 and solenoid 33 and plunger 34, actuating magnets, is, I believe, in use in various forms of electrical controlling apparatus. And, without being able to say exactly where or when, or driving what, I have seen such apparatus. I know that I have frequently seen it.

Q. 189. But you have never seen it actually in use in the governing of the speed of a water wheel?

A. No, sir; I have not."

[Record, Vol. 1, pages 314-315.]

"Q. 192. While you are familiar with the operation of magnets and electrical connections generally, as you have described, you do not mean to say that you have ever seen a series of magnets and contacts connected up as shown in this Lyndon patent?

A. I can't say whether I ever have or have not seen a set connected up exactly as shown in the Lyndon

patent, but I have seen so many magnets and solenoids operate in conjunction with contacts, that the manner in which such magnets and contacts and solenoids and dynamos would work in the Lyndon patent is easy to understand.”

[Record, Vol. 1, p. 316.]

Appellant's witness, Prof. C. L. Cory, testifies as follows:

“Q. 427. By Mr. Westall: With the disclosures of the Lyndon patent before the public for approximately eleven years, have you ever known in all your engineering experience of a single electro-mechanical governor constructed and installed or practically used for the purpose of accomplishing the results of water-wheel regulation made out by Lyndon, constructed in exact accordance with the drawings and the specifications of the Lyndon patent in suit.

A. No; I know of none constructed in exact accordance with the details set forth by Lyndon.

Q. 428. Have you known of any employing the same number of magnets and solenoids and the same general arrangement of springs, circuits and dynamos?

A. Yes, sir; I have known of some that were used practically—perhaps not operating the same number—but operating upon the same general electro-mechanical principles.

Q. 429. Where have you known of these devices being used?

A. At various plants on the Pacific Coast, notably the Folsom Power Company on the American River

near Sacramento, the San Joaquin Power Company, the Utah Light & Power Company, and the Pelluride Power Company in Utah and Colorado.

Q. 430. Did they have this dynamo described by Lyndon?

A. They had the essential characteristics of the dynamo.

Q. 431. They did have a dynamo for the same purpose and in the same position?

A. I don't know.

Q. 432. By Mr. Westall: Did they have a solenoid corresponding to the solenoid 33 and close the circuits in the same general position?

A. They had solenoids and circuits, but I don't know and, in fact, I don't believe they operated in the same detail as set forth in the Lyndon patent, but they were known as electrical governors.

Q. 433. So that I understand that there were in operation certain devices known as electrical governors, but you do not know of any that were constructed with the same number of magnets and the same arrangement of circuits as Lyndon discloses?

A. No.

Q. 434. By Mr. Westall: So that you have never had an opportunity of seeing the actual operations of the device constructed in accordance with the Lyndon drawings?

A. No, sir; I never have."

[Record, Vol. 2, pages 499-501.]

Lamar Lyndon, the alleged inventor and the owner of the patent in suit up to July 7, 1913, called for appellant, testifies:

“XQ. 291. By Mr. Westall: Did any of the concerns against which you threatened suit make, sell or use any device, which might properly be described by the claims Nos. 6 and 7 of the Lyndon patent in suit?

A. I had never seen a governor in which the elements shown in claims 6 and 7 were present, so far as I know, and my claims on the various companies which I alluded to were made on the basis of statements which came to me that equivalent constructions were being used.”

[Record, Vol. 5, page 1981.]

“XQ. 490. By Mr. Westall: There has never been a model or device of an electro-mechanical water-wheel governor constructed in accordance with the drawings and specifications of the patent in suit, has there?

A. I do not know from having seen one that a water-wheel governor has ever been constructed in accordance with all of the disclosures of my invention. I consider that nearly all of the operative governors which I know or which I have any information concerning, make use of some one or more of the elements which I have disclosed in the patent in suit. That is the answer to your question on the assumption that you refer to principles of governing. If you refer to the construction of a governor using all of the principles of governing which I have revealed in this patent, and, furthermore, the specific design of parts disclosed in it and using electro-mechanical means of

operation, together with electro-magnetic speed-responsive devices. I do not know of any governor made in accordance with all of these surrounding conditions that was ever completed, although, as I have previously testified, most, if not all of the parts of one, were made, but never assembled.

XQ. 491. By Mr. Westall: Has there ever been constructed to your knowledge an electro-mechanical water-wheel governor comprising the combination with means of operating the water gate in either direction, a by-pass for the water wheel, and a valve controlling said by-pass, of means connected to the water-gate-operating means and operating the by-pass valve inversely to the operation of the water gate?

A. Not to my knowledge.

XQ. 492. By Mr. Westall: Without quoting in its entirety the language of claim 7 of the patent in suit (which I now place before you), I will ask you if you have ever known of an electro-mechanical water-wheel governor containing within it or comprising the combination of elements of said claim 7 or to which the language of claim 7 might otherwise be properly descriptive and applicable?

A. I do not personally know of any water-wheel governor such as you describe in your question.

XQ. 493. By Mr. Westall: Have you ever known of a governor for water wheels employing as a speed-sensitive device or containing within it as part of its mechanism a dynamo wound to maintain constant potential for varying currents therein but to vary the potential in a greater ratio than the speed?

A. I do not now recall any governor having such speed-controlling means.

XQ. 494. By Mr. Westall: Have you ever heard of an electro-mechanical water-wheel governor containing within it as part of its mechanism a reversing clutch gear adapted to connect the water-gate-operating shaft and the driving shaft in reverse driving relations?

A. Yes. The Geisler governor which at one time was manufactured by the Stillwell-Bierce & Smith-Vaile Company, now the Platt Iron Works of Dayton, Ohio.

XQ. 495. By Mr. Westall: Do you remember approximately when you heard of such a device and when it was made and used?

A. I have seen these governors in operation and, as nearly as I can remember, the first one I ever saw was in 1901 or 1902.

XQ. 496. There has never been constructed to your knowledge any electro-mechanical governor containing the precise number of magnets, solenoids, arrangement of contracts and circuits such as are illustrated in Fig. 1 of the patent in suit, has there?

A. Never to my knowledge."

[Record, Vol. 6, pages 2080-2083.]

See also testimony of defendant's witness, Edward S. Cobb, who testified:

"Q. 62. From the date of the Lyndon application, September 13, 1900, to date, have you ever known of a single water wheel governing device constructed in

accordance with the Lyndon specifications and drawings?

A. I have not."

[Record, Vol. 2, page 596.]

and defendant's witness, S. L. Berry, who testified:

"Q. 33. Have you ever known of a governor such as is illustrated in figure 1 of the Lyndon drawings, or such as corrected and lettered in Complainant's Exhibit C, being installed and being practically used anywhere?

A. I have never seen such a governor."

[Record, Vol. 3, page 913.]

Two concerns at different times since the grant of the patent in suit became interested in, investigated, even took steps toward constructing a model, but abandoned it.

See testimony of Lamar Lyndon, Record, Vol. 5, page 1903, answer to question 171; page 1906, answer to question 174.

Under these circumstances the assertions of appellant's brief are shown to be highly misleading in character. The purpose of such misleading statement is apparent when it is borne in mind that the courts give favorable consideration to inventions which have gone into general public use and have been proven of beneficial character to the public. It is a well recognized rule of law often applied by this court that where the device of a patent has gone in general or extended use the invention is entitled to the beneficent consideration of the court. *However, the fact that the device of a*

patent has never been used at all applies the converse of this rule. This is most aptly referred to by Circuit Judge Lurton, speaking for the Circuit Court of Appeals for the Sixth Circuit, in *National Malleable Castings Co. v. Buckeye M. I. & C. Co.*, 171 Fed. 847, at page 852, as follows:

“The whole ground, for the purpose for which we use the fact of no commercial use, is covered by the admission of Mr. Deitz that no couplers like the patent in suit have ever been put into actual service. The mere fact that a patent has not gone into practical use does not defeat it, nor deprive the patentee of relief in equity against an infringer. The patentee may, if he will, reserve the invention for his exclusive use, or he may suppress it if he elect. It is his private property for the time of the monopoly. *Heaton Peninsular Company v. Eureka Specialty Co.*, 77 Fed. 294, 25 C. C. A. 267, 35 L. R. A. 728; *Paper Bag Cases*, 210 U. S. 405, 28 Sup. Ct. 748, 52 L. Ed. 1122. *The use we make of the fact that the device has never gone into actual service is in the construction or interpretation of the patent. We are justified, in view of the facts of this case, in exercising much caution in attributing to this patent anything more than is plainly shown and distinctly claimed.* *Bradford v. Belknap Motor Company (C. C.)* 105 Fed. 63; *Crown Cork & Seal Co. v. Aluminum Co.*, 108 Fed. 845, 48 C. C. A. 72. *This inference from nonuse, under the circumstances, is the converse of the inference drawn in respect of a doubtful patent when a showing is made that it has gone into large use and has displaced other devices. It is an infer-*

ence against utility from the fact of long nonuse, unexplained by want of means or opportunity.”
(Italics ours.)

See further the opinion of Circuit Judge Putnam, in the leading case of *Bradford v. Belknap Motor Co.*, 105 Fed. 63. Particularly third paragraph on page 64.

The Circuit Court of Appeals for the Sixth Circuit, in *Westinghouse E. & Mfg. Co. v. Toledo, P. C. & L. Ry. Co.*, 172 Fed. 371, says:

“In view thereof the patent should not be given a broad or liberal construction.”

See also,

Boston Woven Hose & Rubber Co. v. Penn.

Rubber Co., 164 Fed. 557; C. C. A. 1st Cir.;

Lovell v. Seybold Mach. Co., 169 Fed. 288; aff.

159 Fed. 736;

Kestner Evap. Co. v. American Evap. Co., 182 Fed. 844.

Judge Coxe, in *Severy Process Co. v. Harper & Bros.*, 113 Fed. 581 (at page 584), says:

“When, however, the question of infringement depends upon the construction of the claims, the court, in the endeavor to find out what it is that the inventor has given to the world, is justified in considering the invention as measured by the success achieved.” * * *

“* * * In such circumstances care should be taken not to reward the one *who is still wandering in the realms of theory at the expense of the man who has actually solved the problem.*” (Italics ours.)

Judge Sanborn, in *Stromberg Motor Devices Co. v. Parker*, 204 Fed. 462, says:

“Perkins’ invention has had no influence on, and never was used in, the automobile carbureter art. It should not rightfully be allowed to dominate that art, unless infringement is clear.”

As said by this court in *Kings County Raisin & Fruit Co. v. United States Cons. S. R. Co.*, 182 Fed. 59, at page 62:

“* * * but it does not appear ever to have been put to use, and there is no evidence that any machine was ever constructed under it. It is one thing to invent the theory of a machine. It is quite another thing to invent a successfully operating machine.”

The proofs conclusively show that instead of the alleged Lyndon invention going into use and being “*epochal in its effect upon industrial and domestic lighting, heating and cooking*” no Lyndon electro-mechanical water wheel governor was ever constructed or used by anyone. The Lyndon invention did not teach anyone anything. From it the art gained nothing. Lyndon’s invention on the contrary existed only in the records of the Patent Office. It had no commercial existence. It was a mere paper conception. That it was dugged up by appellant *as a speculation* with the hope of having the court give the patent the most liberal interpretation and beneficent construction so as to lay tribute upon the successful governors produced by others without knowledge of the Lyndon paper conception and without such Lyndon theory having *in fact* any place or part in the art.

Frankness with the court would have compelled appellant to admit that the Lyndon invention and patent had no actual place in the art. That Lyndon's conception never went beyond paper. Under such circumstances appellant's statement that the Lyndon invention "*has been epochal*" must serve as a caution in considering each of appellant's contentions and representations in this case.

The inventor, Lamar Lyndon, admits that electric governors or electro-mechanical governors are not commercially used. [Xq. 483, Record page 2076, Vol. 6.] This fact is also of weight as Mr. Lyndon testifies that it is his opinion that *electro-mechanical* governors are superior to a purely mechanical form of governor.

The Lyndon device is far too complicated and the action of the electric devices comprising the Lyndon *electro-mechanical* governor are too uncertain to justify any engineer advising the installation of such a governor.

See particularly testimony of Edward S. Cobb, Record Vol. 2, page 594; Q. 59-60; Q. 61, page 595; Q. 617-630, Record, Vol. 3, pages 820-823; also pages 825-826, Q. 637-642; S. L. Berry, Record, Vol. 3, pages 913-915, Q. 34-35.

The proofs in the case conclusively show that the Lyndon patent discloses a mere theory,—a mere paper conception,—which never passed out from the realm of theory into the world of practical use and that from the alleged genius of Lamar Lyndon the world did not actually receive anything of value. He added nothing

to the useful art. The conception embodied in his patent has remained a mere dream,—although nearly eighteen years have passed since Mr. Lyndon applied for the patent.

The Lyndon device is inoperative.

If the device of the Lyndon patent will not operate *to govern the speed of a water wheel* in the manner and for the purpose set forth in the Lyndon patent, then it is a worthless device *and has no utility*. The defense of inoperativeness or want of utility is a distinct defense, not connected in any manner with or dependent upon any other defense. Section 4886, R. S. U. S., provides that:

“Any person who has invented or discovered any new and *useful* art * * * may obtain a patent.”

Not only is novelty required but also *utility*. It is just as necessary for the inventor's conception to be useful for the intended purpose as it is that it shall be novel.

“UTILITY IS INDISPENSABLE TO A VALID PATENT. This is established by the language of the patent act (sec. 4886, R. S. U. S.), expressly limiting its benefits to arts, machines, etc., which are both new and useful. Novelty and utility, both, must concurrently exist, or the grant of the patent is a nullity.”

Hopkins on Patents, page 356.

“A patent is void for want of utility if its disclosure is inadequate to successful reduction to practice. This rule is indeed obvious.”

Hopkins on Patents, page 359, Sec. 298, Rule VII.

In *Mitchell v. Tilghman*, 86 U. S. 287, the court, at page 396, says:

“Inventions, in order that they may be the proper subjects of letters patent, must be new and useful. Utility in most cases is a question of fact, as it usually depends upon the evidence resulting from actual experiment. There are two modes, says Mr. Curtis, in which the utility of an invention may be impeached, the second of which is where it appears that *it is not capable of being used to effect the object proposed.*” (Italics ours.)

See also *Coupe v. Royer*, 155 U. S. 574, near bottom page 574, where it is said:

“A patented machine that will not do what it is intended to do could not sustain an action against one who was shown to use a successful and operative machine.”

Robinson on Patents, Vol. 1, section 338, page 462, says:

“In order that an invention may be patentable it must not only be bestowed upon the public by its inventor, but when bestowed it must confer them a benefit. The invention must therefore be useful as well as new. No recompense can properly be made to one from whom the community receives no consideration; and hence no patent can be granted for a worthless art or instrument,

nor, although granted, can it be sustained after the uselessness of the invention is established.”

“Section 339. UTILITY MEANS INDUSTRIAL VALUE. Utility, as predicated of inventions, means industrial value; the capability of being so applied in practical affairs as to prove advantageous in the ordinary pursuits of life, or add to the enjoyment of mankind.”

Walker on Patents (5th Ed.), page 97, sec. 77, says:

“The useful arts are those that Congress is authorized by the constitution to promote, and accordingly the statute includes utility among the qualities which a process or a thing must have in order to be patentable. To possess utility, a thing or a process must be capable of producing a result, and that result must be a good result. Both these elements inhere in the meaning of the word; and they are so distinct as to require separate explanation.”

“Section 78. Utility is absent from all processes and devices which cannot be used to perform their specified functions, and patents for such subjects are therefore void. This rule applies even to cases in which, by simply adding new elements to useless contrivances, highly useful inventions are produced.”

“In *Burrall v. Jewett* (2 Paige, 143), the patent covered the cylinder of a threshing machine, having rows of teeth inserted in its convex surface and revolving within a barrel which had no teeth. The contrivance was confessedly useless. After the patent for it was granted, the patentee, or some other person, by simply inserting rows of teeth in the concave surface of the barrel, produced the successful threshing machine, which has every-

where succeeded the ancient flail. The law applicable to these facts was stated by Chancellor Walworth in the following terms:

“The patent is void if the machine will not answer the purpose for which it was intended, without some addition, adjustment, or alteration, which the mechanic who is to construct it must introduce of his own invention, and which had not been invented or discovered by the patentee at the time his patent was issued.”

“In *Bliss v. Brooklyn* (10 Blatchf. 522), the patent covered a certain hose coupling. The contrivance was worthless because it proved on trial to be inoperative. The subsequent addition of a lug to one of its parts, transferred the coupling into a useful invention. Judge Benedict nevertheless held the patent to be invalid for want of utility.”

In *Besser v. Merrilat Culvert Core Co.*, 243 Fed. 611, at page 612, the Circuit Court of Appeals for the Eighth Circuit says:

“In other words, plaintiff’s invention is ‘new,’ but it is not ‘useful.’ The term ‘useful,’ as contained in the patent law, when applied to a machine, *means that the machine will accomplish the purpose practically when applied in industry.* It is to be given a practical and not a speculative meaning. *It means that the machine will work and accomplish the purposes set forth in the specifications.* Even if the machine can be made to accomplish the purposes specified, it is not useful, within the meaning of the patent law, if from its inherent nature it will accomplish the purpose only to such a restricted extent as to make its use in industry prohibitive. This has been the interpre-

tation put upon the term in the patent law from the earliest decisions to the present time. Bliss v. Brooklyn, Fed. Cas. No. 1,546; Chandler v. Ladd, Fed. Cas. No. 2,593; Troy Laundry Mach. Co., Limited, v. Columbia Manufacturing Co. (D. C.), 217 Fed. 787. These views are fatal to plaintiff's machine." (*Italics ours.*)

Lamar Lyndon testifies that the construction illustrated in the patent in suit is much cheaper than the other governors of the purely mechanical type. Yet he himself used the purely mechanical governors "which produced substantially the same results by different mechanical arrangements than those suggested by myself." [Record, Vol. 6, pages 2076-77, answer to Xq. 482.] Mr. Lyndon at the time designed the hydro-electric plant for the city of Lynchburg, *but he did not use his invention patented by the patent in suit.* He had also installed water wheels in Texas. We submit that it is highly significant that Mr. Lyndon, although working in this art, never made any use of his alleged invention.

It is possible for defendant to admit nearly everything complainant has said on the question of operativeness even including the *bald assertion that the Lyndon device is operative*, because complainant uses the word "operativeness" in a different sense than defendant.

When defendant asserts that the Lyndon alleged governor is inoperative, it does not mean that any of the features such as solenoids, circuits, magnets, contact points, will not perform the function of their design,

nor do we mean that any combination of such elements in the Lyndon device will not work, nor do we mean that the entire combination of elements will not cause the motions and make the connections that Mr. Lyndon describes. What we mean is that assuming that the movement of the solenoid core, contacts, etc., will take place substantially as described by Lyndon, the Lyndon device will not govern the speed of a *water wheel*, as described by Lyndon, in other words, that the results expected will not follow.

Our contention makes necessary a thorough understanding of the theory of Lyndon—*how he expects his mechanism to operate to govern the speed of a water wheel*.

The device of the Lyndon patent is a wholly inoperative and worthless piece of mechanism, as,

1. Lyndon clearly shows and describes a device, the purpose of which is to regulate the speed of the water wheel, *by maintaining a constant flow in the pipe line*.

See, specification of patent in suit, page 1, lines 8-35; page 4, lines 40-98.

Testimony of appellant's witness, C. L. Cory, Record, Vol. 1, pages 252-253, Q. 60-68.

Testimony of defendant's witness, Edward S. Cobb, Record, Vol. 2, pages 552-3, answer to Q. 5; Record, Vol. 3, pages 829-830, answers to Q. 649-650.

Testimony of defendant's witness, S. L. Berry, Record, Vol. 3, page 898, answer to Q. 5.

2. Lyndon attempts to maintain the flow in the pipe line constant by the use of a by-pass *normally held in half open position, through which water is being constantly wasted*, the purpose being to have a supply of water which may be thrown on the wheel, when owing to an opening movement of the main gate, the wheel momentarily slows down, and to have an outlet for water to compensate for an acceleration of the flow of water in the pipe line when the water gate is moved toward closing position.

See, specification of Lyndon patent in suit, page 1, lines 26-35; page 2, lines 58-65; page 4, lines 31-88.

3. It would seem that nothing could be more clear than that to accomplish the objects of Lyndon, *the valve in the by-pass should be half open, when not actuated for "governing."* It is distinctly so described throughout the Lyndon specification.

4. It is also very distinctly stated throughout the Lyndon specification that whenever the main gate moves either toward open or toward a closed position, *coincidentally* with such movement of the main gate, *the by-pass valve moves in an inverse direction.*

Specification of Lyndon patent in suit, page 1, lines 28 to 35; page 4, lines 40 to 49; page 4, lines 64 to 80.

5. In order that the movement of the main gate and by-pass may be inversely one to the other at all times, it is necessary to provide mechanism which will permit this coincident inverse movement, and Lyndon has clearly attempted to do so. That is to say, the mechanism which controls the by-pass is thrown into

operation at the same time that the mechanism causing movement of the main gate is caused to operate.

Specification of Lyndon patent in suit, page 2, lines 49 to 66; page 3, lines 75 to 88; page 4, lines 16 to 35.

6. Mr. Henry, the complainant, should have been able to explain the operation of the Lyndon patent when he offered himself as a witness in this case. There could be no reason for testifying positively to a certain operation, and thereafter absolutely contradicting himself.

Mr. Henry first takes the position that contacts 40-40a (or 41-41a) are made *at the same time* as contacts 45-45a; 46-46a; 103-100; 104-101; which is manifestly true because in order for coincident operation of the by-pass valve with the main gate, the by-pass valve mechanism *must* be set in operation at the same time.

See first Mr. Henry's testimony given Jan. 15, 1914, Record, Vol. 1, page 120, ans. to Q. 57; pages 114-115, answers to Qs. 33-40.

In this connection also see, specification of Lyndon patent, page 1, commencing with line 30.

Appellant's witness, C. L. Cory, also first testifies that energization of the magnet controlling the by-pass will be coincident with the energization of the magnets controlling the water gate. [Record, Vol. 1, page 234, sentence commencing in 5th line from bottom of page.]

The device of the patent in suit is inoperative if constructed according to Lyndon's description and drawing, and if operated in accordance with Lyndon's theory of operation:

(1) Lyndon has not disclosed operative means for accomplishing the result desired, because,

(a) If contacts are made at 40-40a; 45-45a; 46-46a; 103-100; 104-101 at the same time *the returning device will be thrown into operation causing the breaking of contacts at 40-40a before governing has been effected*, because,

(a-a) It is to be noted that the movement of rod 25-25a is very slight—not a full quarter of a turn of the shaft 12.

See line 133, page 3, Lyndon specification, *et seq.*:

“* * * which causes engagement of disks 23 22 and causes the disk 22 to be carried *slightly around* one way or the other, * * * thereby returning the lever 26 to normal position.”

(b) Rod 25 cannot be safely adjusted to break contact only after moving a full quarter of a turn, because if for any reason (owing to a more than usual energization of solenoid 33) contact at 40-40a is not broken immediately upon rod 25a being pushed to the limit of its range of movement (not to exceed a quarter of a turn of shaft 12) rod 25a will be carried around the shaft and it will be pulled in a direction opposite to what is desired.

(c) It should also be noted that the hub of disk 22 is much larger in diameter than shaft 12. This multiplies the distance to which rod 25a may be pushed by the thrust caused by the revolution of shaft 12, so that an extremely slight movement of shaft 12 might be sufficient (and it is plainly contemplated by

the patentee, as evidenced by the statement that disk 22 is carried *slightly around*) to break contact at 40-40a.

(d) The maximum movement of shaft 12 before contact is broken cannot be over a quarter of a turn.

(e) Shaft 12 is a faster moving shaft than shaft 20 and consequently both by-pass valve and main gate *will only commence to move before being thrown out.*

(f) *The so-called returning device of the patent in suit is not dependent in its operation upon the needs of good governing, but operates arbitrarily upon a slight movement of the shaft 12 without regard to whether proper regulation would require a wide opening of the main gate and by-pass or only a slight opening of such main gate and by-pass.*

(g) Appellant's witness, C. L. Cory, *admits* that the Lyndon device would not be operative if contacts were made at the same time.

See Record, Vol. 2, page 502, answer to Q. 439.

(h) Henry admits that there is no statement in the Lyndon patent, to the effect that Mr. Lyndon had in mind any adjustment which would permit movement of the main gate without any corresponding movement of the by-pass valve.

See Record, Vol. 1, pages 348-349, answer to Q. 298.

(i) Defendant's witness, S. L. Berry, testifies:

"The mechanism as shown is inoperative and especially inoperative in the return mechanism. This return mechanism comes into action simultaneously

with the gate-operating mechanism. There is no time allowed for gate movement, nor any action depending on gate movement. The mechanism shows the return device to be of exceeding quickness in action. There is no rest between the application of the gate-moving device and the operation of the return mechanism. Furthermore, on the operation of this return mechanism the clutch throwing it into action is disconnected, leaving the solenoid 33 free to make the same connection previously made, the result being a vibration of the lever 40 between contact and non-contact. I can see no element properly correlating the action of the return mechanism with the gate movement.” [Record, Vol. 3, page 900.]

“Q. 32. Referring to the springs shown at 29 29 and 27 28 in the drawing of Complainant’s Exhibit C and in the Lyndon patent, I will ask you to state what you understand to be the function of those springs, how they aid, if at all, in the operation of the device that is shown in the Lyndon patent.

A. The springs 29 29 placed between collars 29a 29a and working from fixed part 30, the returning-mechanism consisting of rod 25, link 25a, clutch 22, the springs 27 and 28, placed between collars 27a and 28a, and working against control-lever 26, are inserted to permit clutch 22 to operate the return-mechanism and controls lever 26, at the same time permitting controlling-lever 26 to operate from solenoid 33 without interference from the returning mechanism. Fundamentally, these springs are not required in the mechanism inasmuch as clutch 22 can be put in opera-

tion by clutch 23 at any point in the circumference. The movement of clutch 22 cannot much exceed the range of control-lever 26. As far as the operation is concerned, the effect would be the same with the return-mechanism directly connected to the control-lever 26. As shown on the drawing, springs 27 28 disturb the function of spring 38, working against the pull of the solenoid core 34. The solenoid core 34 to be stable must have a range responsive to various speeds of the generator 8. At the neutral position of control-lever 26 the spring system 27 28, 29 29, is balanced exerting no pressure on control lever 26. In this position the pull on the solenoid core 34 is balanced by the tension of spring 38 modified by the action of spring 37 which, in itself, has no true function, its use serving simply to modify the portions of spring 38, the balance in this solenoid mechanism necessarily being between the pull on the core on the one hand and the extension of spring 38 on the other. When the control-lever 26 is moved from its neutral position by the core 34 it encounters a positive resistance in either direction, the result being that this positive resistance is added to an increasing spring tension in spring 38 in one direction, and added to a decreasing tension in spring 38 in the other, the result being a different action of one side and the other, due to changes in speed of the generator 8." [Record, Vol. 3, pages 912-913.]

"Q. 141. You have mentioned in your previous testimony the operation of the returning device, not stating the reasons for your opinion as to the impracticability of the device shown and described in the Lyndon pat-

ent in suit. Please state more fully your reasons for the opinion expressed at that time.

A. Referring to Complainant's Exhibit C representing in a clearer manner the parts shown in figure 1 of the Lyndon patent No. 695220, we find this returning device to consist of a clutch part 23 free to move endwise on the shaft 12, but constrained to rotate therewith, the clutch part 22 freely mounted on shaft 12, and having connected to it by bolt or pin a connecting rod 25a, which is attached to the return rod 25, having thereon the springs 29 29, held between collars 29a 29a, a bearing on fixed frame portion 30, and springs 27 28, held between collars 27a 28a, and bearing on either side of the control-lever 26. This clutch is thrown into action through the lever 24 fulcrumed at 24a, engaging on one of its ends through a fork the clutch member 23, and having on its other end an armature 31 which is attracted to the electromagnet 32 on the passage of current therethrough. The current required to energize the said electromagnet 32 is supplied by the generator 8, on the making of a connection at contact points 45 45a, 46 46a, in the circuit 102 98 99. The contacts 45a 46a placed opposite to the contact 45 and 46, are mounted on the lever 43 fulcrumed at 43a, provided with a curved slot 44, having therein a pin or roller 44a attached to the bell-crank 42, which is fulcrumed at 42a to a fixed frame member and connected at its third end to a rod not marked in this exhibit but marked 36 in figure 1 of the Lyndon patent. Said rod 36 is connected to the rod 35, forming a portion of a core 34, acting within and influenced

by the solenoid 33. The action of this core 34 is resisted primarily by the spring 38, modified by the action of springs 37 27 28 29 29. Solenoid 33 is energized at all times during the operation of the plant by means of a current furnished by the generator 8 through a circuit marked in this exhibit 35a, and in figure 1 of the Lyndon patent 33a. The arrangement of these parts is such that at the normal operating speed the current furnished by the generator 8 to energize solenoid 33 sufficiently to attract core 34 by an amount equal to the tension in the spring 38 modified as before mentioned. On increase of speed the pull on core 34 is increased, resulting in a movement of the core 34 within the solenoid, making a contact at 40 40a, and through the mechanism before described at 45 45a, 46 46a, 103 100, 104 101. As shown in the drawings and described in the specifications, the contacts on the lever 43 are made simultaneously with those on the lever 26. As electric action is extremely rapid this will produce simultaneous action at the electromagnets 15 and 32. Examining the relation of the part furnishing motion to the clutch member 23, we find it to be the water-gate-operating shaft 12 set in action by the reversing clutch-gear shown at 9, 10, 11 and 13, deriving power from the driving shaft 6. The movement required on the part of the clutch member 22 to throw open the contacts at 40 located on lever 26 is very small, being a small part of one revolution. The water-gate-operating shaft 12 as shown is a high speed member operating much more rapidly than the succeeding portions of the device con-

necting it to the water-gates. In consequence of the various relations mentioned, and especially the simultaneous action of contact and the small movement required in that part of the clutch member 22, the control-lever 26 will be acted upon within an exceedingly short time after gate-operating shaft 12 starts to move, and as a consequence of this, the contacts at 40 40a are open, the electromagnet 15 is deenergized, the lever 14 is returned to central position by means of its balancing springs, the action of the clutch 13 ceases, preventing further motion of the water-gate-operating shaft 12. Furthermore, the disconnection of these parts and return of the control-lever 26 to its neutral position, leaves said control-lever free to respond to the action on the part of the solenoid 33 and its core 34. This freedom permits the core 34 to immediately reengage contact 40 unless within this exceedingly short interval of time the generator 8 has returned to its normal speed, at which point the control-lever 26 is balanced in its neutral position. Following this reengagement at contacts 40 40a, the cycle of operations before described reoccur and will continue, disengaging and engaging the control-lever 26 and the clutch 23 22 in an exceedingly rapid manner. The means shown provide no parts by which these movements can be constrained and controlled in order to permit the water-gates to be operated to the amount required. In other words, the operation of the returning mechanism is dependent solely on the speed variation of the dynamo 8, and has exceedingly small relation with the movement of the water-gate-operating parts.

Q. 142. By Mr. Westall: Suppose you were to construct a device substantially in accordance with the drawings of the Lyndon patent in suit, and were to set that device in operation by permitting water to flow through the main pipe-line. Please state how you would expect the device to operate.

Mr. Blakeslee: We object to this question as necessarily indefinite. The word "substantially" is very elastic, and we wish to know, before we permit this question to be answered without objection, whether the answer means a construction in accordance with the drawings or one subject to alterations under the control of mental reservations of one sort or another.

Mr. Westall: By "substantially" is meant in such manner as one skilled in the art with the Lyndon patent before him, and who had been requested to build a device in accordance with the specifications and drawings of the Lyndon patent, would build such device. There are always, of course, minor changes in the actual construction of a device. But by "substantially" I mean approximately "exactly."

Mr. Blakeslee: The further objection is made that the question does not call for the best evidence but for a mere question of opinion. We are charging infringement of this patent by the embodiment of the invention in certain apparatus. That is open to discussion and has been discussed in this case. If the defendant wishes to produce any other construction alleged to embody the invention of this patent and following more or less specifically the exact line and word disclosures of this patent, let it do so. And let the evidence be adduced

to show how the same operates. The patent is presumed to be operative and speaks for itself, unless evidence can be adduced contrary to the general purport of the patent.

A. In view of extremely rapid action described in my last answer of the returning device, and the relatively slow movement of both the water-gate parts and the by-pass parts, and the weight and size of these latter parts, I would expect in a mechanism constructed in accordance with the Lyndon patent specifications to find a rapid intermittent attempt on the part of the contact-making devices to operate the said gate and by-pass parts, and an equally rapid attempt on the part of the returning device to prevent such action. In view of these conditions, the gate and by-pass parts, if they move at all, would do so by an exceedingly small amount during each cycle, especially in the case of the butterfly by-pass valve, which in most plants would be large and heavy, and subject to a great difference of pressure on its two sides, which difference in pressure would vary rapidly with any displacement from its normal position. There is in a valve of this nature the necessity of considerable exertion of power and the lapse of a certain amount of time to produce movement, which, taken in connection with the lost motion throughout the mechanism, would tend to the result predicted." [Record, Vol. 3, pages 1002-1007.]

(j) *We have the tacit admission of complainant that the Lyndon device would be inoperative if the contacts were made coincidentally in a flat contradiction of his first testimony. Two days after having testified that*

contacts were coincident [Record, Vol. 1, page 115, ans. to Q. 38], *Henry testifies* [Record, Vol. 1, pages 212-215] *that these contacts are made in sequence as distinguished from coincident.*

(J) To provide for any sequence energization of the various magnets as suggested by Mr. Henry would require a *departure from the principles of the Lyndon patent*, because,

(1) Such a reinvention of the Lyndon patent would permit a movement of the main gate without a movement of the by-pass valve. This would be in derogation of the showing in the drawings and of the description.

(2) There is no suggestion in the Lyndon patent that any sequence of energization was desirable.

(3) The substitution of mercury contacts would not render the Lyndon device operative.

See testimony of defendant's witness, S. L. Berry, Record, Vol. 3, pages 1007-1012. In answer to Q. 147, page 1009, Mr. Berry says:

"The substitution of mercury contacts for those shown in the patent at 45 45a, 46 46a, 103 100, 104 101, would not, in my opinion, render the mechanism operative, even for the sequence of action aimed at."

See further Mr. Berry's answer to Q. 148.

(K) Complainant's only answer to defendant's contention that the Lyndon device is inoperative is the production of a model which ignores the question completely, because,

(1) "Complainant's exhibit Lyndon model" is not constructed in accordance with the Lyndon patent:

- (a) It is not a water wheel governor.
- (b) It does not operate as a water wheel governor.
- (c) It shows absolutely nothing that defendant has not already tacitly admitted.

We call the court's particular attention to the testimony, in sur-rebuttal, of defendant's witness, Prof. William F. Durand, who is professor of mechanical engineering at Stanford University. Prof. Durand analyzes the Lyndon patent in and points out the failure of the model to prove anything in reference to the operativeness or inoperativeness of the Lyndon theory. Prof. Durand's testimony is printed in Volume 7 of the Record, commencing on page 2741. In answer to question 23, Prof. Durand says (referring to the model, "Complainant's patent model"):

"The mechanism could not be considered as a proper operating model representing the disclosures of the Lyndon specification, without it contained all of the essential elements of operation which are implied in such specification. I find certain elements lacking in this model which are essential to the operation of a complete hydraulic power plant unit combined with a governing device such as is implied in the Lyndon specification. * * *" [Record, page 2767.]

Prof. Durand's testimony utterly destroys the probative effect of this model. A reading of his testimony will demonstrate the misleading character of this exhibit. Prof. Durand sums up his reasons on re-direct, see Record, pages 2864-2869.

The District Court found that:

“The evidence shows, unquestionably, that the Lyndon invention will not work if the mercury cups are used as disclosed in the patent without change.” [Record, Vol. 1, page 67.]

“There never has been a machine manufactured like that described in this patent.” [Record, Vol. 1, p. 67.]

The opinion of the District Court conclusively shows the broad and expanded interpretation asserted by appellant for the claims of the patent in suit. In the District Court the appellant contended that “it is not necessary to resort to the doctrine of equivalents in order to determine this infringement.” [Record, Vol. 1, page 62.] Appellant’s contentions ignore the plain rule of patent law, repeatedly applied by the Supreme Court and by this court, that where two devices operate upon different principles and under different modes of operation one cannot infringe the other.

Westinghouse v. Boyden Power Brake Co., 170
U. S. 537;

Cimiotti Unhairing Co. v. American Fur Ref.
Co., 198 U. S. 399;

Stebler v. Porterville Citrus Ass’n., 248 Fed.
927, 930.

As said by Your Honors in the latter case:

“While the same result is accomplished in the defendant’s machine as in the complainant’s, there appears to be such a variation of means as to avoid infringement in the features complained of.”

The appellant's contention in the District Court "that the word means is so broad in its scope that it embraces any mechanism that will accomplish the result claimed for his patent" [Record, Vol. 1, page 63], was not only a direct admission that the devices of defendant vary more than merely colorably from the devices or elements of the Lyndon patent but also a bald misstatement of the law. As said by Walker on Patents (5th Ed.), Sec. 341, page 425:

"* * * but if the mode of operation is substantially the same, it does not follow that the charge of infringement must be affirmed."

Field v. DeComeau, 116 U. S. 187;

Yale Lock Co. v. Sargent, 117 U. S. 378;

Diamond Drill Co. v. Kelly Bros., 120 Fed. 293.

As said by Circuit Judge Hough, in Linde Air Products Co. v. Morse Dry Dock & Repair Co., 246 Fed. 834 (C. C. A. 2nd Cir.):

"There is no magic in a name, nor in a claim; that the words preferred by a patentee to define his invention apply literally to another's device *suggests, but does not prove*, infringement; there must be a substantial identity, to justify that conclusion of law. Edison v. American Co., 151 Fed. 787, 81 C. C. A. 391." (Italics ours.)

Notwithstanding the breadth of the word "means" it cannot be all embracing. As said by Mr. Justice Holmes, in Towne v. Eisner, 38 Sup. Ct. Rep. 158 (Oct. 1917 Term):

"A word is not a crystal, transparent and unchanged, it is the skin of a living thought and may vary greatly in color and content according

to the circumstances and the time in which it is used. *Lamar v. United States*, 240 U. S. 60, 65."

It is clear that a defendant's device must be a literal copy of the device as shown in the patent in suit, or, in order to infringe, must be the mechanical equivalent. The District Court properly determined the error of appellant's contention.

While it is the general rule that the grant of a patent is *prima facie* evidence of its validity, such presumption is recognized as a very slight presumption. In the case at bar the presumption is not fortified by any evidence (such as is usually before the court in patent cases involving meritorious patents), that the device of the patent has gone into use; has had an actual place in the art; has in fact proven of value to the public. On the contrary no Lyndon *electro-mechanical* governor was ever made or ever used. It is well recognized that this presumption of validity is weakened by a showing that the examiners of the patent office overlooked material parts of the prior art when considering the application for patent.

In the present suit the presumption of validity is substantially lacking:

(A) There are many mistakes and errors in the Lyndon patent specification and drawing which could not have been allowed to pass uncorrected by the examiner in charge of the examination of the Lyndon application had said examiner thoroughly understood the device.

See the testimony of defendant witness, S. L. Berry, Record, Vol. 3, pages 909-911, answers to Q. 28-29. (This testimony also points out that "Complainant's Exhibit C" is not a copy of Fig. 1 of the Lyndon patent but on the contrary shows a modification of Fig. 1 of the patent. See Mr. Berry's testimony in answer to Q. 28-32, Record, pages 909-913.)

(B) Several important patents which have the effect of limiting the Lyndon claims, or warranting their disallowance on the part of the Patent Office Examiner, were not discovered by the Patent Office and were not cited on the patent application, because,

(1) French patent #291,588, granted August 8, 1898, to Escher Wyss & Co.—over a year before the application for the Lyndon patent in suit (Sept. 13, 1900) was overlooked by the examiner and not cited.

(2) Foreign patents are sufficiently proven.

R. 454 (offered 456, line 18);

R. 1389 to R. 1391, section 893 R. S. U. S.;

Schroerke v. Swift Cortney & Beecher Co., 7
Fed. 469;

Barber v. Mexico National, No. 73 Conn. 587,
48 Atl. 758.

(3) Said French patent reads literally on some of the claims of the Lyndon patent in suit.

R. 530, line 8, to R. 532, line 6—(Cobb);

R. 827, line 17, to R. 830, line 21—(Berry).

(4) Swiss patent No. 17,536 granted Dec. 15, 1898, to Irene Shaad (granted nearly two years prior to the

Lyndon application—(Sept. 1900)—was overlooked by patent examiner and not cited.

(5) The claims of Lyndon patent in suit read literally on said Swiss patent.

See, testimony of appellee's expert, Cobb. Record, Vol. 2, pages 639-641, Q. 96-98; testimony of appellee's expert, Berry, Record, Vol. 3, pages 953-956, Q. 62-63.

Hopkins on Patents, Vol. 1, page 28, section 13:

"Where the history of the application for a patent shows that the Patent Office did not refer to and consider the references which are urged against the validity of the patent in litigation, *the court must determine the weight and effect to be given such references, as a matter of first impression, and the failure of the Patent Office to cite such references may wipe out the ordinary presumption of validity attendant upon the grant.*"
(Italics ours.)

See,

William B. Scaife & Sons Co. v. Fall City Woolen Mills, 194 Fed. 139, last paragraph, page 145;

Westinghouse Electric & Mfg. Co. v. Toledo P. C. and L. Ry. Co., 172 Fed. 392-393 (last paragraph page 392);

American Soda Fountain Co. v. Sample, 130 Fed. 149 (last paragraph page 149).

C. The patent was granted without thorough examination:

Imperial Valley Cap etc. Co. v. Crown Cork etc. Co., 139 Fed. 312, reversing 123 Fed. 669.

Electro-Mechanical.

Defendant does not infringe any of the claims of the patent in suit, because:

A. Lyndon must be limited to *a special form of water wheel governor*, namely: an *electro-mechanical water wheel governor*, because,

(1) He has limited himself to an electro-mechanical water wheel governor, because,

(a) He has used the term “electro-mechanical” in his short descriptive title in compliance with section 4884 R. S. U. S.: “Every patent shall contain a short title or description of the invention or discovery correctly indicating its nature and design, * * *.”

(b) Lyndon has distinctly stated in the body of his specification that he has “invented certain new and useful improvements in electro-mechanical water wheel governors, of which the following is a specification.”

(c) Lyndon illustrates and describes solely a combination of electric and mechanical means, most appropriately described as “electro-mechanical” designed as a water wheel governor.

(d) Lyndon has not described or shown a purely electric or purely mechanical water wheel governor.

(e) His claims must be read as covering a combination of elements forming a part of an “electro-mechanical” water wheel governor, because:

(a-a) Section 4888 R. S. U. S. provides that before any inventor shall receive a patent he shall make application therefor, and shall file a written description of his invention, *and he shall particularly claim THE*

PART, improvement, or combination which he claims as his invention or discovery. Part of what? Part of what he has invented. What has he invented? He distinctly tells us in his specification, *an electro-mechanical governor*.

(f) It is fair to presume that he so limited himself to a special form of water wheel governor, namely: an “electro-mechanical water wheel governor,” because:

(a-a) It was necessary for him to so limit himself in view of the prior art, because:

(1) Both electric water wheel governors and mechanical governors were old.

(2) A patent is a contract between the state and the patentee, and is to be interpreted by the same rules as any other contract:

National Hollow Brake Beam Co. v. Interchangeable Brake Beam Co., 106 Fed. 693, Circuit Court Appeals, 8th Circuit, last paragraph on page 701, as follows:

“A patent is a contract by which the government secures to the patentee the exclusive right to vend and use his invention for a few years, in consideration of the fact that he has perfected and described it and has granted its use to the public forever after. *The general rules for the interpretation of grants and contracts govern its construction*, and the equitable principle that one who has derived great benefit from the performance of a contract ought not be allowed to escape its burden without cogent reason is not inapplicable in its exposition. Among the primary rules for the construction of a contract are these: the court should

put itself in the place of the parties at the time it is made, and should read its terms in the light of the facts and circumstances which then surrounded them. When the intention of the parties is manifest, it should control, regardless of inapt expressions and technical rules.”

Century Electric Co. v. Westinghouse Electric & Mfg. Co., 191 Fed. 350, 354, p. 354.

(3) The general rule for interpretation of contracts that the intention of the parties should prevail is applicable, because:

Bishop on Contracts (second enlarged edition),
page 155, section 380:

“The rule most conspicuous and far reaching is, that a written contract shall be so interpreted as, if possible, to carry out what the parties meant. This is likewise the foremost rule from interpretation of statutes, namely: so to render them as to give effect to the legislative intent. Section 381. The parties are bound by the terms which they have voluntarily employed, and since they cannot plead ignorance of the law, neither likewise can they of the effect of their language. Within this rule, a stipulation for a thing will not be satisfied by something else presumably as good, as, if a railroad by its ticket promises a ride from Portland to Boston it cannot be compelled to furnish one from Boston to Portland, and if an insurance policy declares that certain answers shall constitute a part of the contract and be a warranty, the insured person cannot avoid their effect by showing their immateriality.”

(a) The intention of the government in calling the device and the issuing a patent for—not simply a “water wheel governor” but in calling it “an *electro-mechanical* water wheel governor” is clear.

(b) The intention of the patentee in expressly stating that an “*electro-mechanical* water wheel governor” was what he invented cannot be mistaken.

Beale Cardinal Rules of Legal Interpretation.

(4) The cardinal rule that effect should be given to every part of a contract is applicable, because:

Beach on Contracts, Vol. 1, Sec. 73, says:

“The cardinal rule in the interpretation of contracts is to give effect to every part of them if practicable.”

Bishop on Contracts (second enlarged edition), page 158, Sec. 384, says:

“Every clause and every word should, when possible, have assigned to it some meaning. It is not allowable to presume, or to concede, when avoidable, that parties in a solemn transaction have employed language idly.” (Citing many cases.)

(a) The court cannot find infringement *without totally disregarding and ignoring the word “electro-mechanical”* in the title and statement of the Lyndon specification.

(5) The proper attitude for the court should be to *interpret the contract in favor of the government, rather than in favor of a private suitor; in limitation of the monopoly rather than in expansion of it.*

Bishop on Contracts (second enlarged edition), page 170, Sec. 415, says:

“Where the state with us, or in England the crown is a party on one side and a subject is a party on the other, the entire contract is to be construed more strongly against the subject.”

Bishop on Contracts (second enlarged edition), page 417, Sec. 490, says:

“In general, government contracts are interpreted by the same rules as those of individuals, but in early times there were a few differences, not all of which have become obliterated. *As already seen, a difference which remains is, that the government contract is construed more strongly against the private party; the rule of the old law being that ‘if the right lie equal between the king and subject the king’s title hath the preference*
* * *

Section 991:

“The common law prefers the king to the private creditor in respect of debts due to both; so that if the debtor cannot pay all, the crown has the first claim upon his property. *This principle has been adopted by Congress in its legislation, and it is constantly acted upon by the courts of the United States. In probably most of our states it is accepted as part of their unwritten law.*”

Citing:

U. S. v. State Bank, 6 Peters 29-34;

U. S. v. Hack, 8 Peters 271;

Thelusson v. Smith, 2 Wheat. 396;

Harrison v. Sterry, 5 Cranch 289;

U. S. v. King, Wall. C. C. 113;

U. S. v. Heaton, 128 Fed. 414.

“(6) Lyndon’s conduct in not suing upon his patent for a lapse of over eleven years raises the presumption that he did not believe the structure now complained of infringed.

Bishop on Contracts (second enlarged edition), page 168, Sec. 412:

“In case of doubt, *the interpretation which the parties by their acts under their contract have practically given it, will have weight, and it may be controlling.*”

B. Defendant does not use an electro-mechanical water wheel governor.

See, for example, the testimony of defendant’s expert, S. L. Berry, Record, Vol. 3, page 1055:

“The term ‘electromechanical’ used in the title of the Lyndon patent in suit No. 695220 and in the first paragraph of the specifications, describes the device as shown in the drawings and specifically explained in the specifications, inasmuch as the controlling elements are electrical and the gate-operating parts are mechanical in their nature. Such word, however, does not describe the devices shown in complainant’s exhibits mentioned, inasmuch as there is no electric feature involved, the means being strictly mechanical as to the speed-sensitive parts and mechanical and hydraulic as to the other operating parts.”

What Constitutes Infringement.

It is elementary patent law that in order to infringe not only must the defendant's device perform the same function as that of the device of the patent, but it must perform that function in substantially the same manner. Difference in principle or mode of operation negatives infringement,—even of the most pioneer or “basic” invention.

Westinghouse v. Boyden Power Brake Co., 170
U. S. 537;

Cimiotti Unhairing Co. v. American Fur Ref.
Co., 198 U. S. 399;

Walker on Pats. (5th Ed.), Sec. 341, page 425.

But not only must the mode of operation or principle of the device, as a whole,—as a machine,—be substantially the same as that of the patented invention, but the mode of operation of each of the constituent parts or elements and their interrelation be substantially the same, and each must perform in the device substantially the same function and in substantially the same manner, as the device for which is to be found the equivalent in the patented machine.

Riverside Hts. O. G. Ass'n v. Stebler, 240 Fed.
703 (C. C. A. 9th Cir.);

Hopkins on Pats., Vol. 1, Sec. 38, page 39;

Walker on Pats., Sec. 340;

O'Reilly v. Morse, 56 U. S. 63, pages 112-113;

Steam Gage and Latern Co. v. St. Louis Ry.

Supp. Mfg. Co., 29 Fed. 447;

Werner v. King, 96 U. S. 218;

Engle Sanitary & Cremation Co. v. City of Ellwood, 73 Fed. 484;

Reis v. Barth Mfg. Co., 136 Fed. 850, last par. p. 853;

Diamond Match Co. v. Ruby Match Co., 127 Fed. 341.

In Severy Process Co. v. Harper Bros., 113 Fed. 581, 584, Judge Coxe says:

“Claims of a patent should not be so broadened by construction as to include devices which, though accomplishing the same function, do so by new combinations, operating upon principles so different as to entitle their originator to be considered as an independent inventor.”

Difference in Result.

The Lyndon patent describes and claims a device in which *there is a constant and excessive waste of water.*

See, specification of patent in suit, page 1, lines 26-35:

“Normally the gate or valve in the by-pass will be halfway open, so that the amount of water flowing through the by-pass and around the wheel without doing work will be half the amount which the by-pass is capable of carrying.”

Lyndon specification, page 4, lines 35-40.

“After the governing takes place the by-pass gate is either open or closed, or nearly so, *and in order to be useful for a second governing must return to its normal position.*”

Lyndon specification, page 4, lines 80-84.

See testimony of S. L. Berry, Record, Vol. 3, page 1024, answer to Q. 162; pages 1195-1198, ans. Q. 591-602.

As said by Mr. S. L. Berry:

“In a majority of plants installed for the generation of power from water the question of water economy is of vital importance.” [Record, Vol. 3, page 1021.]

Such economy of water cannot be secured and use the theory of the Lyndon invention.

“When the main water-gate of the wheel disclosed in the Lyndon patent is closed, the by-pass valve is in half-open position, thereby wasting a quantity of water equal to one-half the full capacity of the by-pass.” [Record, Vol. 3, page 1023.]

“In cases wherein economy of water is a factor, or a desirable feature, I would not consider the device” (of the Lyndon patent in suit) “as practical commercially, inasmuch as attainment of the objects set forth would prevent such economy of water.” [Record, Vol. 3, page 1022.]

No adjustment of the by-pass valve, of the Lyndon patent, to occupy any position other than half open position as the normal position of such valve could be made without departing from the essential principle of the Lyndon invention.

See testimony S. L. Berry, Record, Vol. 3, pages 1012-1018; Vol. 4, pages 1445-1447, ans. to Q. 1409-1410; Prof. Durand, Record, Vol. 7, pages 2763-2766, answers to Q. 19-20.

If the principle upon which the Lyndon invention is founded, then, is a normally half-open by-pass valve (with its accompanying waste of water), it is elementary that claims which include such by-pass and by-pass valve cannot be so construed as to ignore such principle of operation; such claims are limited by the mode of operation of the devices shown in the patent drawings and described in the specification and cannot be so interpreted as to disregard the principles of the drawings and description. Inasmuch as the entire theory of the Lyndon patent is builded upon a normally half-open by-pass valve which may be moved from such half-open position to closed or to fully open position as required coincident with the reverse opening or closing of the main water gate, no device which does not utilize such underlying principle can embody the Lyndon invention. The claims of a patent cannot cover that which is not illustrated or described in the drawings or specification.

Electric Storage Battery Co. v. Gould Storage Battery Co., 158 Fed. 610, 616;

Valvona-Marchinoy Co. v. Perella, 212 Fed. 168;

Siemund v. Enderlin, 212 Fed. 410;

Gunn v. Bridgeport Brass Co., 148 Fed. 239;

Locke Insulator Mfg. Co. v. Ley, 143 Fed. 911;

Bates Machine Co. v. William A. Force & Co., 149 Fed. 220;

American Sewage Disposal Co. v. Pawtucket, 132 Fed. 35.

In *Wicke v. Ostrum* (103 U. S. 461), the court had before it the *Wicke* pioneer patent for machines for nailing boxes. With the machine of this patent the nails were driven vertically. With such a machine the nails must necessarily be held in place by some mechanical means until they were guided to and fastened in the board. The defendant conceived the idea of driving nails horizontally instead of vertically, and made a machine for that purpose. In such machine the nails would lie in a groove and be held there by gravity until forced into the board. The court says:

“As has already been seen, Wicke made an upright machine. For such a machine the combination of all his several elements was necessary. If any one, or its mechanical equivalent, was left out, an upright machine like this could not be operated successfully. A combination of other elements, not the equivalents of his would be a different machine and, consequently, not an infringement. From the evidence, it is clear he was the first to put into practical use the idea of driving more than one nail at the same time in the manufacture of boxes by the use of machinery. The idea he could not patent, but his contrivance to make it practically useful he could. By his patent he appropriated to himself only so much of the field of invention which his idea embraced, as the machine described and claimed in his specification covered.”

While Lyndon's conception of an electro-mechanical water wheel governor depended upon such a half-open by-pass valve and its consequent water waste, defendant's mechanical (not electro-mechanical) governor

does not utilize such principle. Defendant's governor economizes water. In defendant's device the auxiliary relief nozzle is normally closed or nearly so.

See testimony, complainant's witness, C. A. Heinze, Record, Vol. 1, pages 181-183, ans. Q. 12-27; complainant, G. J. Henry, Jr., Record, Vol. 1, pages 349-350, answer to Q. 299; pages 381-382, answer to Q. 368; S. L. Berry, Vol. 3, pages 1037-1040, answers to Q. 173-177.

In defendant's device the auxiliary relief nozzle only opens and permits the escape of water *to relieve excessive pressure* to which the pipe line may be subjected on rare occasions.

See testimony of complainant's witness Scattergood, Record, Vol. 1, page 161, ans. to Q. 20-44; pages 175-178, ans. to Q. 59-65.

The devices of defendant differ from that of patent in suit in broad principles of operation and design:

(1) Lyndon seeks by his by-pass to govern the wheel by *maintaining a constant flow of water in the pipe line.*

(2) With Lyndon, the by-pass is an important means of overcoming inertia effects of the water *which interfere with the proper speed of the water wheel—under Lyndon's theory the half-open by-pass is an indispensable means for governing the speed of the water wheel.*

(3) In defendant's device governing is *mainly accomplished by the main needle.* — . . . —

(4) In defendant's device the auxiliary nozzle is used as a *safety valve* to prevent the damaging effects to the pipe line of excessive pressure which occur on extraordinary occasions—the main needle moves many times to govern the water wheel without causing a movement of the auxiliary relief nozzle. (See testimony of S. L. Berry, Record, Vol. 3, pages 1079-1082, answer to Q. 215.)

(5) Lyndon, in the patent in suit, clearly describes a device in which the by-pass valve is operated *inversely* to the operation of the water gate in *both* directions.

See testimony of S. L. Berry, Record, Vol. 3, pages 1155-1157, answers to Q. 443-448; page 1176, answer to Q. 525-530.

(6) The claims in suit cannot properly be construed to indicate a choice of directions. Hence complainant's expert, Prof. Cory, impliedly admits that defendant does not infringe.

Record, Vol. 2, pages 424-428, answers to Q. 208-216; see also testimony of S. L. Berry, Record, Vol. 3, pages 1180-1183, ans. to Q. 541-546.

(7) In defendant's device the auxiliary relief nozzle (attempted to be read as a by-pass valve by complainant) occupying a closed position, or a nearly closed position, *cannot have a movement inverse to that of the main nozzle in both directions at all times*. On the contrary, when such auxiliary nozzle is closed a further opening of the main needle can have no effect on the auxiliary needle nozzle and the normal position of defendant's auxiliary nozzle is closed,—not half-

way open for operation towards closed or towards open position *inversely* to the movement of the main gate.

In the Lyndon device the *means for accomplishing results are mainly electrical and cannot be described as substantially the same means as the purely mechanical means used by defendant*. Appellant's expert, Prof. Cory, admits there is no true equivalence. See Record, Vol. 2, pages 443-444, answers to Q. 262-264.

Walker on Patents (5th ed.), page 424, Sec. 340:

"* * * *Any person may accomplish the result performed by a patented thing without infringing the patent, if he uses means substantially different from those of the patent. To hold the contrary of this rule would be to retard, and not to promote the progress of the useful arts.*"

O'Reilly v. Morse, 15 How. 62;

Steam Gauge & Lantern Co. v. Mfg. Co., 29 Fed. 447;

Johnson Furnace Co. v. Western Co., 178 Fed. 819;

Smith v. Downing, Fed. Cas. 13,036.

Driving Shaft.

Defendant does not infringe claims 1, 2, 4, 5 and 9 of the Lyndon patent in suit. In defendant's device there is no driving shaft within the meaning of the claims.

The driving shaft is properly pointed out by Mr. Henry as *shaft 6* of the Lyndon patent. [Record, Vol. 1, page 321, ans. to Q. 214.] This shaft 6 performs

several functions. (1) It drives the speed sensitive device, *dynamo* 8. (2) It positively, through gear connections, moves both water gate and by-pass valve.

Mr. Henry has pointed out the shaft just below the fly balls of defendant's device as the equivalent of the driving shaft of the Lyndon claims. [Record, Vol. 1, page 327, ans. to Q. 270.]

It is manifest that said shaft pointed out in defendant's device does not perform the function of the driving shaft 6 of the Lyndon patent. *It does not move the water gate nor the auxiliary relief valve. No power is transmitted through it as in the Lyndon patent to move either of the valves of the nozzles. An element may be an equivalent if it does more, but never if it does less.*

There is no such driving shaft in defendant's device. See testimony of defendant's witnesses, E. S. Cobb, Record, Vol. 2, pages 646, 655 and 661, and S. L. Berry, Record, Vol. 3, pages 1051, 1054.

Reversing Clutch Gear.

Defendant does not infringe claims 1, 2, 4, 5, 8 and 9 of the patent in suit because in defendant's device there is no "reversing clutching gear" nor "reversing gear" and does not infringe claims 3, 6 and 7 of said patent because in defendant's device there are no "means for operating the water gate in either direction" within the meaning of the patent in suit.

"Clutch" is defined in Webster's New International Dictionary as a "coupling for connecting two working parts as shafts or a shaft, and a pulley permitting either to be turned at will into or out of gear with

the other, as by moving a lever. The two principal types of clutch are the friction clutch and the claw clutch in which jaws or claws interlock when pushed together."

"*Mechanics*": a power transmitting device operating as by friction or interlocking, for securing or breaking rotative continuity as between two shafts or a pulley and a shaft. (Funk and Wagnalls Standard Dictionary.)

"*Clutch*" (in mechanics): a movable coupling or locking and unlocking contrivance used for transmitting motion or for disconnecting moving parts of machinery. (Century Dictionary.)

This "clutch gear" of the Lyndon patent is pointed out by E. S. Cobb, Record, Vol. 2, page 647, Q. 102, 103; Mr. Henry, Record, Vol. 1, page 333, Q. 259; S. L. Berry, Vol. 3, pages 1055-1057, Q. 191-193.

The patentee, Lyndon, has used the term "clutch gear" in its strictly technical and proper sense. There is no question as to what element is intended by him by the language of his claims. The experts agree substantially on the element of the Lyndon drawings intended to be described by the term "clutch gear". Compare testimony of E. S. Cobb, Record, Vol. 2, page 648, answers to Q. 104-107; G. J. Henry, Jr., Record, Vol. 1, page 322, Q. 217-228; and Prof. Cory, Record, Vol. 2, page 444, Q. 265.

Unquestionably the same elements pointed out as the "reversing clutch gear" and "reversing gear" in claims 1, 2, 4, 5, 8 and 9, also constitute the "means for operating the water gate operating shaft in either direction" of claim 3. Shaft 6 is clearly referred to

in the patent specification as the “driving shaft” and is so pointed out by complainant. [Record, Vol. 1, page 321, Q. 214.] *Shaft 12* is distinctly referred to in the patent specification as the “water gate operating shaft” of all the claims, except claims 8 and 9. See Lyndon patent specification, page 4, line 109, claim 1:

“In a governor for water-wheels, the combination with a water-gate-operating shaft and a driving-shaft, of a reversing clutch-gear, *adapted to connect the water-gate-operating shaft to the driving-shaft in reverse driving relations, * * **”.

Shafts 6 and 12 are manifestly the only shafts connected by the reversing clutch gear in reverse driving relations.

In the Lyndon patent specification, line 129, page 4, claim 2, we find substantially the same language.

Lyndon specification, page 5, line 11, *et seq.*, refers to the water-gate-operating shaft and the returning device provided with a clutch connection *to said shaft*, leaving no possible doubt that shaft 12 is intended as the “*water-gate-operating shaft*”.

In the Lyndon patent specification, page 5, line 23, claim 4, clearly indicates that the shaft 12 is the water-gate-operating shaft.

In the Lyndon patent specification, page 5, line 37, claim 5 also clearly designates the shaft 12 as the water-gate-operating shaft.

In claims 8 and 9 of the Lyndon patent, however, the context is such as to compel the conclusion that

Lyndon meant the shaft 20 by the term “water-gate-operating shaft”.

Shaft 6 being the driving shaft, and shaft 12 being the water-gate-operating shaft of claim 3, the only element coming within the description of “means for operating the water-gate-operating shaft in either direction” is the “clutch gear” or “reversing clutch gear”, 9, 10, 13.

Claims 6 and 7 refer to this “clutch gear” a little more indefinitely in that they included possibly the shafts 12 and 20 with their operative connections, nevertheless the principal part of “means for operating the water gate in either direction” of these claims is the aforesaid “reversing clutch gear”.

One might suppose that the phrase “means for operating the water gate in either direction” warrants a broader range of equivalents than the language “a reversing gear and shafts 12 and 20” but this is not the law. A patentee is only entitled to the specific means shown in his specification and drawings, or their mechanical equivalents. To permit him to so broaden his claims by the use of indefinite language would often amount to giving him a monopoly of the principle or result, thus barring all other inventors from arriving at the same result by different means. The word “means” is often used in patent claims to avoid an awkward repetition of a number of elements. It is certainly obvious that the court must look to the specification and drawings to determine whether the “means” for performing a given function is operative and practical, because if the patentee’s means will not

do what they are intended to do, he has not conferred any benefit on the public, and the court will and must also compare such “means” with those used by a defendant in order to properly determine the question of infringement.

In Walker on Patents (5th Ed.), sec. 117a, page 137, it is said:

“Where some of the parts of a combination operate therein to give motion to other parts, which do the final work of the combination, it is proper to specify the former by the use of such terms as ‘means,’ ‘mechanism,’ or ‘devices’ for giving that motion, except when these terms are applied to an element or part which constitutes the essence of the invention. If they are used under such circumstances the claim will be regarded as functional. *But such general language will not include all means, mechanism, or devices which can perform that function, but only those which are shown in the patent, and their equivalents.* And in this case also, the question whether other means, mechanism, or devices are equivalents of those shown in the patent, will be determined by the established rules on that subject, *rather than by any apparent precision or elasticity of the language used in the claims to designate the parts involved in the inquiry.*” (Italics ours.)

That this conclusion is concurred by complainant is attested by the fact that complainant points out the same element in defendant’s device as the equivalent “*reversing clutch gear*” and “*means for operating the water gate in either direction.*” [See Record, Vol. 1,

lines 14-16 of page 217, where Mr. Henry points out the cylinder "W" of defendant's Cottonwood Plant; page 218, lines 4-5, where he points out the cylinder F-F of defendant's Division Creek Plant; while on page 322, answer to Q. 217, he points out said cylinder F-F and cylinder W as *reversing clutch gears*.

With all the expert qualifications of complainant, Henry, and with his long study of the Lyndon patent, *as well as his great interest in the outcome of this suit*, complainant has not been able to distinctly and positively point out in defendant's device any mechanical equivalent of the "*reversing clutch gear*" or the "*means for operating the water gate in either direction*", as called for by the claims of the patent in suit. The attention of the court is called to the wavering, uncertain and contradictory character of Mr. Henry's testimony on cross-examination as to this "reversing clutch gear" and such "means for operating the water gate in either direction". See Record, Vol. 1, pages 322-324, Q. 219-227.

Prof. Cory (the only other witness on behalf of complainant who attempted to point out mechanical equivalency) does not agree with Mr. Henry. See Record, Vol. 2, pages 444-446; Q. 265-271. *Prof. Cory admits that he does not find physical equivalents of the "clutch gear,"—except so far as result only is concerned.*

There is no equivalency in the legal sense unless there is not only equivalency in result but also that such result is obtained by substantially the same means cooperating together in substantially the same manner.

Judge Baker in *Engle Sanitary & Cremation Co. v. City of Ellwood*, 73 Fed. 484, says:

“‘One thing, to be the equivalent of another, must perform the same function as that other; and, while it can be such an equivalent if it does more than that other, it cannot be such equivalent if it does less.’” (Bottom of page 485-486.)

“And it is an essential rule, governing the application of the doctrine of equivalents, that not only must there be an identity of function between the two things claimed to be equivalents, but that function must be performed in substantially the same way by an alleged equivalent, as by the thing of which it is alleged to be an equivalent, in order to constitute it such.” (Top of page 486.) (Italics ours.)

See also,

Machine Co. v. Murphy, 97 U. S. 120;

Roller Mill Patent, 156 U. S. 261;

Seeley v. Electric Co., 44 Fed. 420.

Appellant's expert, Prof. Cory, finally admits, on cross-examination, that the elements pointed out by Mr. Henry as being the equivalent of Lyndon's "clutch gear" do not and cannot perform the function of such "clutch gear". See Record, Vol. 7, pages 2450-2453, Qs. 959-961; Record, Vol. 7, pages 2455-2457, Qs. 967-973.

Complainant's attempt to point out in defendant's apparatus the equivalent of the clutch gear completely fails. Mr. Henry's testimony is uncertain and contradictory. Prof. Cory contradicts Mr. Henry. Prof. Cory admits equivalents only in result and finally admits no equivalency of the parts mentioned by Mr.

Henry, and in so doing gives a good and sufficient reason therefor.

See testimony of Cobb, Record, Vol. 2, page 648, answer to Q. 104 to page 650, answer to Q. 107; Berry, Record, Vol. 3, page 1057, Q. 194 to page 1059, Q. 196.

The omission of the single element of “reversing clutch gear” or what has been treated as the same thing by complainant, “means for operating the water gate in either direction” from the claims in suit requires a finding of non-infringement and a dismissal of the bill for want of equity. Engle Sanitary & Cremation Co. v. City of Ellwood, 73 Fed. 484.

Clutch Connection to Said Operating Shaft.

In defendant’s device there is no “clutch connection to said operating shaft” within the meaning of said claims 3 and 5, nor any mechanical equivalent thereof.

In his testimony Mr. Henry failed to clearly point out said “clutch connection” of claim 3. His testimony is contradictory. Record, Vol. 1, page 195, answer to Q. 117 to page 201, answer to Q. 119, Exhibit -Z- and Z-Z, differentiated and clutch clearly pointed out as white metal parts of Exhibit -W-. Record, Vol. 1, page 197, line 14, -M- on Division Creek, exhibits distinctly referred to as designating “automatic clutch control valve”. Referring [Record, Vol. 1, page 217] to Exhibits E, F, G, Cottonwood Plant, Henry points out [Record, Vol. 1, page 217, line 10 from bottom] a “returning device” for said controller provided with a clutch connected to said operating

shaft as parts marked L, K, M. clutch portion shown in Exhibit -M- appears in the exhibit to be the means for regulating the flow of oil from one side of the piston of the dash pot. -M- is distinctly referred to in Record, Vol. 1, page 135, line 13, as "clutch". Referring [Record, Vol. 1, page 218, first twenty lines) to Exhibits H, I, J, K and L, Henry points out the clutch at Z-Z.

Record, Vol. 1, page 219, Henry points out the same parts which he has heretofore pointed out as "clutch", namely, the means of regulating the flow of oil from one side of the dash pot to the other as the "actuating means" controlled by said "controlling means".

See Record, Vol. 1, page 232, answer to Q. 258 to page 334, answer to Q. 264; Record, Vol. 1, page 339, Q. and answer 276; Record, Vol. 1, page 334, lines 8-12.

The parts pointed out finally by Henry as alleged equivalents of such clutch connection are not such in fact. They do not perform substantially the same function. They do not constitute substantially the same means, nor embody substantially the same idea of means. They do not operate in substantially the same manner.

The testimony of Prof. Cory (the only other witness besides complainant, who on behalf of complainant has attempted to point out alleged equivalents in defendant's devices) is also contradictory. See Prof. Cory's testimony given January 26th, 1914, Record, Vol. 2, page 461, Q. 328 to page 462, answer to Q. 332.

Prof. Cory points out part marked -e- on Exhibit K.K.K. Record, Vol. 2, page 464, Q. and answer 342, Prof. Cory points out part marked -e- on K.K.K. as clutch of claim 5. Approximately eighteen months later Prof. Cory is again called in rebuttal and contradicts his former testimony. Prof. Cory then confuses clutch connection of claim 3 with the reversing clutch gear. Record, Vol. 7, pages 2407-2411, Q. 878-883. (This cross-examination finds proper basis in the direct, see Record, Vol. 6, page 2234, Q. 692; page 2236, Q. 697-8; page 2239, Q. 709.) See further Prof. Cory's attempted correction of his testimony on re-direct examination. Record, Vol. 7, page 2419, Q. 901; page 2421, Q. 905. But see his answers on re-cross-examination, Record, Vol. 7, page 2427, RXQ. 925; page 2450, RXQ. 957-967; page 2456, RXQ. 971-2.

The parts first pointed out by Prof. Cory as equivalents of the "clutch connection" of claim 3 do not coincide with those previously pointed out by appellant Henry.

The parts finally on rebuttal pointed out by Prof. Cory as the equivalents of the "clutch connection" of claim 2 do not coincide with any of those pointed out by Mr. Henry. There is an irreconcilable conflict in the testimony on behalf of complainant as to the mechanical equivalent of the clutch connection of claim 3.

The parts pointed out first by Cory as the equivalents of said "clutch connection" are not such equivalents. They do not perform the function of such clutch con-

nection. They do not constitute substantially the same means. They do not operate in substantially the same way. Neither can the parts which Prof. Cory has pointed out finally on rebuttal be considered mechanical equivalents of the "clutch connection" of claim 3 because they do not perform substantially the same function; they do not constitute substantially the same means; nor do they operate in substantially the same way.

Mr. Cobb testifies that no such "clutch connection" nor its mechanical equivalent is to be found in defendant's device. [Record, Vol. 2, page 653, ans. to Q. 109; page 658, 4th line; Vol. 3, pages 846-847, ans. to Q. 711.]

Mr. Berry testifies that no such clutch connection as described in claim 3 of the patent in suit nor its mechanical equivalent is to be found in defendant's device. [Record, Vol. 3, page 1060, ans. to Q. 197-200; page 1075, ans. to Q. 211; page 1083, ans. to Q. 216-217; page 1100-1101, ans. to Q. 234.]

Prof. Cory has admitted that the dash pot with its piston and piston rod cannot be used as a substitute for a clutch gear or that which is the same thing, a clutch connection. Prof. Cory has admitted that the elements named by Mr. Henry as the equivalents of such "clutch connection" of claim 3 are not an equivalent.

Defendant's witnesses, Cobb and Berry, have testified distinctly and positively that there was no equivalent of such clutch connection to be found in defendant's device.

The preponderance against any alleged equivalents is clearly in favor of defendant. Messrs. Cobb, Berry and Cory all deny the uncertain and wavering testimony of Henry as to the existence, in defendant's devices, of this clutch connection of claim 3, or its equivalent.

The burden of proving infringement is upon the plaintiff and doubt will be resolved against him.

Mitchell v. Tilghman, 86 U. S. 287;

Price v. Kelly, 154 U. S. 669.

Means for Reversely Controlling the Clutch Gear.

Defendant's device does not contain "means for reversely controlling the operation of such clutch gear" of claim 1, or the "electromagnetic means controlling such clutch gear" of claim 2, or the "two electromagnetic devices for reversely operating the reversing clutch gear of claim 5.

These elements refer to magnets 15 and 16 and, in case of claim 1, probably, includes their armature 17. This is clear from the context of the Lyndon patent. [Specification, page 1, lines 92-97; page 3, lines 75-82.] This is admitted by witness Prof. Cory. [Record, Vol. 2, page 449, answer to Q. 283.]

Not containing the "clutch gear" or reversing clutch gear as previously shown it logically follows that defendant's device cannot contain any means for operating the clutch gear.

Complainant has been unable to point out in defendant's device any equivalent of said "means for controlling or operating the clutch gear" as called for in claims 1, 2 and 5.

On the contrary complainant mistakes the meaning of the claims and makes no attempt to point out any equivalent of the element called for by the claims. [See Record, Vol. 1, page 330, Q. 248.] Mr. Henry mistakes the solenoid 33 for “electromagnetic devices” and laboring under this error of the supposing that solenoid 33 is meant by electromagnetic devices of the claims and confusing magnets 15 and 16 with said solenoid, Mr. Henry points out part of the line to line valve. [See Record, Vol. 1, page 325, Q. 231; page 330, ans. to Q. 248-250.]

While Mr. Henry points out the line to line valve of Exhibit Z as the alleged equivalent of solenoid 33, mistaking that for the element called for by claims 1, 2 and 5, as “electromagnetic means controlling the clutch gear” his expert witness, Prof. Cory, points out the same line to line valve as equivalent of magnets 15 and 16. [Record, Vol. 2, pages 448-450, ans. to Q. 281-287.]

Prof. Cory correctly points out solenoid 33 as “an electromagnetic device connected to such dynamo and controlling the clutch gear controlling means.” [Record, Vol. 2, page 451, ans. to Q. 291.]

Prof. Cory, however, adds to the confusion by pointing out the same identical parts which he has referred to as equivalents of magnets 15 and 16 as equivalents of solenoid 33. [Record, Vol. 2, pages 451-452, Q. 292-295.] Later Prof. Cory increases the confusion by pointing out two pipes leading from the cylinder B as the two electromagnetic devices of claim 5. [Rec-

ord, Vol. 2, pages 457-458, ans. to Q. 315-317, page 527, ans. to Q. 515.]

(By way of interruption permit defendant to call the court's attention to the fact that these same pipes have been very much over-worked for "equivalents" of elements of the Lyndon claims. They have been also pointed out by the said Prof. Cory as the equivalent of the lever 26 of the patent in suit [see Record, Vol. 2, page 458, ans. to Q. 318-321] and also as the equivalent of the solenoid 33 [see answer to Q. 410, Record, Vol. 2, page 493]).

The absurdity of attempting to read the line to line valve, for regulating the flow of fluid under pressure to the cylinder operating the gates, as the equivalent of *first*, the solenoid 33 and, *second*, the magnets 15 and 16 is manifest; magnets 15 and 16 perform different and separate functions, one is being operated while the other is at rest. They do nothing but attract an armature which operates a lever. The line to line valve marked "controller" on "Complainant's Exhibit Z-Z" does not perform any such function.

Mistaking the solenoid 33 as the element called for by claims 1, 2 and 5 as the means for reversely controlling the operation of the clutch gear results in a total failure to point out any equivalents of the magnets 15 and 16 and the attempt of Prof. Cory is contradictory of the testimony of Mr. Henry who has used the elements pointed out by Prof. Cory as the equivalent of something else.

It should also be noted in passing that complainant also attempts to read this line to line valve as the

element described as a “controller” which is clearly described as the lever 26 in the patent specification. This matter, however, will be further elaborated when we come to consider the element described as “controller” in the claims.

This line to line valve, therefore, is referred to as *the equivalent* of the solenoid 33; also *the equivalent* of magnets 15 and 16; and also *the equivalent* of the lever 26.

Mr. Cobb has testified that there is no such element, in defendant’s device, as the means for reversely controlling the operation of the clutch-gear of claims 1, 2 and 5 of the patent in suit. [See Record, Vol. 2, page 651, lines 16-18; page 646, lines 21-24.] Mr. Berry also so testifies. [Record, Vol. 3, page 1051, next to last paragraph; page 1052, 3rd paragraph of answer to Q. 187; lines 7 and 8 of page 1075.]

It is obvious that none of the things that have been suggested by either Mr. Henry or Prof. Cory can be considered as substantially the same means as the magnets 15 and 16 and their armature 17. None of the devices that have been suggested by either Mr. Henry or Prof. Cory perform the functions of the magnets 15 and 16 and their armature 17; much less in substantially the same way; on the contrary the idea of means and the interrelation of the component parts is distinct and non-equivalent.

Dynamo.

Defendant’s devices contain no dynamo such as described in claims of the patent in suit, nor the mechanical equivalent of such dynamo.

Mr. Henry has pointed out the fly balls of defendant's devices as the mechanical equivalent of such dynamo. The fly balls and the connections, or any of their connections, cannot be described as the mechanical equivalent of the dynamo of the claims in suit. They do not perform the same function as the dynamo of the claims in suit. The dynamo of the patent has *two* functions, *first* to supply the power necessary to provide a path of travel for the force which is necessary to actuate certain levers. *Second*, to supply the power for force necessary to actually throw such levers. The fly balls of defendant's device merely, by operating a piston in a cylinder, open or close the pipes controlling the flow of power fluid from a source of supply. The centrifugal force of the rotation of the fly balls is totally unlike the electromotive force of the dynamo utilized in actually throwing the levers. The important function of furnishing power to actually throw levers to make connections is not to be found in the fly balls of defendant's device. The fly balls of defendant's device do not operate in substantially the same way as the dynamo of the patent in suit. The electromotive force of the dynamo of the patent in suit first opens a path for itself and controls the opening and closing of such path and then the same electromotive force from said dynamo moves in that path to throw the levers which make connections to move the water gate and by-pass valve; while the centrifugal force of the fly balls does not move any levers to make any clutch connection whatever, the actual mov-

ing of any connection being done by fluid under pressure coming from another source.

“One thing to be the equivalent of another must perform the same function as that other; and while it can be such an equivalent if it does more than that other, it cannot be such equivalent if it does less.” (Italics ours.)

Engle Sanitary Cremation Co. v. City of Ellwood, 73 Fed. 484.

Solenoid 33.

Defendant does not infringe claims 1, 2, 5 and 9 of the patent in suit, as in defendant's device there is no equivalent of an “*electromagnetic device* connected to such dynamo, and controlling the clutch-gear-controlling means”, of claim 1, nor any *solenoid* connected to said dynamo”, of claim 2, nor any “solenoid device energized by said dynamo” of claim 5, nor any “*electromagnetic device* connected to said dynamo”, of claim 9.

In the patent in suit this element is designated as the *solenoid 33*.

Prof Cory [Record Vol. 2, page 451, Ans. to Q. 291] points out the solenoid 33 as the electromagnetic device of claim 1; and points out solenoid 33 as “the solenoid connected to said dynamo” of claim 2. [Record, Vol. 2, pages 453-4, Ans. to Q. 300.]

Appellant Henry's testimony as to an alleged equivalent of this solenoid 33 is contradictory. (1) He has pointed out “connections between the fly balls for transmitting movement to and making sensitive to speed changes.” [Record, Vol. 1, page 328, Ans. to

Q. 242-243.] (2) He afterwards changes his testimony and points out the part marked "controller" on Exhibit Z-Z [Record, page 329, Ans. to Q. 245], including therein, "its casing and parts surrounding it in, co-operation with which it moves." [Answer to Q. 246, page 329.]

Prof. Cory does not agree with Mr. Henry as to the equivalency of solenoid 33.

Prof. Cory points out the pair of pistons marked B of blue print KKK. [Record, Vol. 2, page 454, Ans. to Q. 301.] Prof. Cory also confusingly points out the pipes D-D as the equivalent of the electromagnetic device, solenoid 33, of claim 9. [See Record, Vol. 2, pages 492-494, Ans. to Q. 405-410.]

There is the utmost confusion in the record in pointing out the equivalent of the solenoid 33, because,

The same parts have been pointed out as the equivalent of the lever 26.

Prof. Cory [Record, Vol. 2, pages 458, 459, Q. 318-321], pointed out as the device controlled by said solenoid. [Record, Vol. 2, page 492, Q. 405 to page 494, ans. to Q. 410.]

When Mr. Cobb is asked to point out in defendant's device a "controller" he very properly points out the fly balls and their connections. These are clearly the speed sensitive devices of defendant's governor, and really perform the function of controlling the flow of oil or water from one side of the piston of the cylinder to the other, being in fact, part of the fly ball mechanism. [See Record, Vol. 2, page 655, line 14; page 659,

4th and 5th lines from bottom; Vol. 3, page 845, Q. 706.]

Mr. Cobb testifies that there is no equivalent of solenoid 33 in defendant's device. [See Record, Vol. 2, page 646, line 13; page 647; page 650, 3rd line from bottom; page 651, line 19; page 660, line 4; page 661, line 9.]

Mr. Berry corroborates Mr. Cobb that there is no equivalent of the solenoid 33 in defendant's device. [See Record, Vol. 3, page 1086, line 9; page 1087, line 6; Vol. 4, page 1367, 6th line from bottom; page 1371, line 13.]

Complainant has not sustained the burden of proof in pointing out an equivalent of said solenoid 33, on the contrary, complainant contradicts himself and is in turn contradicted by his own witness as to the alleged equivalent of the solenoid 33. The same parts which have been pointed out as the equivalent of this solenoid 33 have also been pointed out as being an equivalent of other mechanism of the patent in suit. Two duly qualified experts on behalf of defendant have stated positively that there is no mechanical equivalent of such solenoid 33 to be found in defendant's device.

It is manifest, that neither (1) the casing of the cylinder, and (2) the parts surrounding it in co-operation with which it moves as pointed out by Mr. Henry, nor the pair of pistons marked B on Exhibit KKK are mechanical equivalents of the solenoid 33. They cannot be considered substantially the same means. They do not operate in substantially the same manner. They do not perform substantially the same functions.

Mr. Lyndon has positively limited himself to a certain kind of means, namely: "electromagnetic," and to a certain kind of device, namely: a solenoid device.

The claims should not be construed as though these words of limitation were not included therein.

"Some persons seem to suppose that a claim in a patent is like a nose of wax which may be turned and twisted in any direction, by merely referring to the specification, so as to make it include something more than, or something different from, what its words express. The context may undoubtedly be resorted to, and often is resorted to, for the purpose of better understanding the meaning of the claim; but not for the purpose of changing it and making it different from what it is. The claim is a statutory requirement, prescribed for the very purpose of making the patentee define precisely what his invention is; and it is unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms."

White v. Dunbar, 119 U. S. 47.

Means for Resisting the Action of Solenoid 33, Springs 37-38-27-28-29.

In defendant's device there are no "means for resisting the action of said electromagnetic devices in such manner, that at normal speed the clutch mechanism will be disengaged, but on increase or decrease from normal speed the clutch will be operated to govern the water-gate through its operating-shaft," (claim 1). These means are springs 37-38-27-28-29. This is plain from an examination of the patent speci-

fication. Prof. Cory agrees that springs 37-38 and 27-28-29 are the means pointed out, but also adds springs directly beneath magnet coils 15 and 16. [See Record, Vol. 2, page 452, 11th line from bottom of page.] Prof. Cory illustrates his failure to thoroughly understand the disclosure of the patent in suit in thus including the springs beneath the magnets 15-16 but the variance is immaterial for the purpose of our present argument.

As alleged equivalents Mr. Henry points out the "vertical connecting rod between the fly balls and screw threads on the valve stem, which rod is indicated in its lower portion by Y. G. on Exhibit Z-Z and forms the valve stem." [See Record, Vol. 1, page 329, last two lines.] *Prof. Cory does not agree with Mr. Henry but points out a "pressure fluid" contained and capable of being admitted and discharged within the controlling cylinder B on Exhibit KKK.* [Record, Vol. 2, page 452, Q. 297.]

Complainant has not sustained the burden of proving infringement by proving defendant's device contains the equivalent of "means for resisting the action of said electromagnetic device in such manner, that at normal speed the clutch mechanism will be disengaged, but on increase or decrease from normal speed the clutch will be operated to govern the water-gate through its operating shaft".

Does appellant rely upon the testimony of his expert, Prof. Cory, or upon his own testimony? Is either correct?

Two witnesses on behalf of defendant testified that no such means are to be found in defendant's device. See testimony of E. S. Cobb, Record, Vol. 2, page 646, 7th and 8th lines from bottom of page; testimony of S. L. Berry, Vol. 3, page 1051, Q. 186.

It is obvious upon comparison of the functions of the parts suggested by complainant Henry and his expert that neither the rod between the fly balls as suggested by Mr. Henry nor the pressure fluid can be properly described as means for resisting the action of the cylinder or piston in the cylinder.

The rod pointed out by Mr. Henry clearly does not resist any action of the line to line valve or its piston in the sense of the patent, or any other sense; *its function is not to resist but to convey power*. It is likewise obvious that the power fluid suggested by Prof. Cory does not resist the action of anything within the meaning of the patent; the power fluid has an entirely different function of actuating the piston of the operating cylinder.

Device Controlled by Solenoid 33 and Carrying a Contact Device. Claim 2.

Defendant does not infringe claim 2 of the patent in suit as in defendant's device there is to be found no "device controlled by said solenoid and carrying a contact device" or its mechanical equivalent.

This element is clearly pointed out by Prof Cory, [Record, Vol. 2, page 458, Q. 318-321], as lever arms 26 pivoted at 26a, contacts 40-40a 41-41a.

In defendant's device there is no element to which the description could properly apply, nor which per-

forms substantially the same function. See testimony of S. L. Berry, Record, Vol. 3, page 1052, Q. 187; E. S. Cobb, Record, Vol. 2, page 651, lines 22-23.

Mr. Henry has pointed out "pipe connections or parts to the water-gate operating means and the power fluid engaged in the action of the controller for the purpose of shifting the piston head and piston rod in said operating cylinder" [Record, Vol. 1, page 331, Q. 254], as such alleged equivalent.

(Note: This same power fluid has been pointed out by Prof. Cory [Record, Vol. 2, page 452, Q. 296-7] as the equivalent of the springs 37-38-27-28-29.)

Prof. Cory admits that he finds no physical equivalent, but rather inconsistently finds the equivalent in the pipes D-D (which have previously been pointed out T. 328, lines 16 to 26, by him as two electromagnetic devices.) [See Record, Vol. 2, page 458, Q. 319-320.]

Prof. Cory having previously pointed out the pair of pistons within the cylinder marked -B- on Exhibit KKK, as the equivalent of solenoid 33 [Record, Vol. 2, page 454, Q. 301], points out the same pair of pistons as corresponding with contacts 40-40a, 41-41a, the pair of pistons must thus be the equivalent of solenoid 33, and also the contact device of claim 12. [Record, Vol. 2, page 529, Q. 520-521.]

It is apparent, therefore, that there is an irreconcilable conflict in the testimony of complainant and his expert. Surely it does not require argument to show that the pipes D-D of Exhibit KKK cannot be the equivalent of the lever arm 26 pivoted at 26a, and carrying a contact device. They are obviously totally

different elements, performing totally different functions. It does not require argument to show that the combination of (1) pipe connections and parts to the water-gate-operating means and a power fluid engaged in the action of the cylinder for the purpose of shifting the piston in said operating cylinder does not perform the functions of the lever 26 with its contact. There is no part of the lever 26 that can be compared with the power fluid.

In defendant's device there is no such element to which the description "a device controlled by said solenoid and carrying a contact device" could apply. *We have seen that there is no equivalent of the solenoid, and therefore obviously cannot be any equivalent of a device controlled by any solenoid.* There is obviously no contact device nor its equivalent in defendant's device. See testimony of E. S. Cobb, Record, Vol. 2, page 651, lines 22-23; testimony of S. L. Berry, Vol. 3, page 1053, first three lines.

Energizing Connections, Claim 2.

Defendant does not infringe claim 2 of the patent in suit as in defendant's device there are no "energizing connections for the electro-magnetic gear controlling means controlled by said contact device".

Cory finds no exact physical devices that are equivalent, but finds an alleged equivalent in the two pipes D-D which connect the cylinder marked -B- on Exhibit KKK with cylinder -A-. [Record, Vol. 2, page 459, Q. 322.]

(Note: Cory has previously pointed out these same pipes D-D on Exhibit KKK [Record, Vol. 2, pages 457-8, Q. 315-316; page 527, Q. 515] as "two magnetic devices (magnets 15 and 16) and has used these same pipes D-D also as alleged equivalents [Record, page 458, Ans. to Q. 319-320] of a "device controlled by said solenoid 33" and "carrying a contact device", claim 2, namely: lever 26. These pipes have, therefore, been pointed out by Cory as (1) equivalent of magnets 15 and 16; (2) equivalent of lever 26; (3) equivalent of electric circuits through which magnets 15 and 16 are energized.)

On the other hand Mr. Henry points out "pipe connections or parts to the water-gate-operating means and the power fluid engaged in the action of the controller for the purpose of shifting the piston rod in said operating cylinder." [Record, Vol. 1, page 331, Q. 254.]

The testimony of Henry and Cory is thus contradictory and conflicting. Mr. Henry includes power fluid, as part of the "energization connections"; Prof. Cory only mentions pipes. Prof. Cory has previously pointed out the power fluid as the equivalent of the "means for resisting the action of the electromagnetic devices" of claim 1 (being the springs 37-38, 27-28 and 29). [Record, Vol. 2, page 452, Q. 296-7.]

There being no equivalent in defendant's device of the electromagnetic gear controlling means (magnets 15 and 16) it obviously follows there can be no energizing connections for said electromagnetic means.

See testimony of defendant's witnesses, E. S. Cobb, Record, Vol. 2, page 650, Q. 108; page 651, lines 19-24; S. L. Berry, Vol. 3, page 1052, Q. 187; page 1053, lines 3-6.

Controller 26.

In defendant's device there is to be found no *controller* "responsive to changes of speed of the water-wheel". of claims 3, 4 and 8; nor any "circuit-controller" of claim 5; nor any "controller operated by said electromagnetic device and controlling said reversing-gear" of claim 9.

Each of the elements referred to in slightly different language in each of the said claims just mentioned relates to the same mechanical device, namely: *the lever 26 pivoted at 26a (and not to solenoid 33)*. *It is clearly and explicitly so stated in several places in the specification of the patent in suit.* Line 26, page 2 of the specification, "*controller 26.*" Line 43, page 2 of the specification "circuit controller". Line 63, page 3 of the specification "controlling lever 26".

Mr. Lyndon nowhere in his specification refers to the solenoid 33 as simply the "controller" as he has done with lever 26. In claim 5 he refers to the solenoid 33 as a "solenoid device" and to the lever 26 as a "circuit controller." *In claim 9 of the patent in suit, Lyndon claims both elements, the lever 26 and the solenoid 33. He refers to the lever 26 as a "controller operated by said electromagnetic device" namely: solenoid 33.* Mr. Lyndon has several times in his specification and claims referred to lever 26 as a "*controller*" but has never so referred to solenoid 33,

although he has referred to solenoid 33 as a controlling solenoid.

Prof Cory admits that there is no equivalent of the "circuit controller" in the infringing device. [Record, Vol. 2, page 464, Q. 340-341.]

In construing the claims of a patent, the court should adopt the meaning obviously placed upon them by the applicant in his specification. Where he has distinctly referred to an element by a certain name, and distinctly claimed it by the same name in one of his claims, the court is warranted in assuming that he means the same element when he uses the same term in other parts of his specification, especially when there is no reason for placing any other meaning on the term, except perhaps, that it might be convenient for a plaintiff in attempting to make out a case of infringement. To turn and twist the claim like a nose of wax. *White v. Dunbar (supra)*.

"No patented invention can be practically or fairly understood or explained if the language of the claim is entirely disassociated from the specification and the claims and specification should be read together."

1900 Washer Co. v. Cramer, 169 Fed. 629.

See also:

General Electric Co. v. Richmond Street & Interurban Ry. Co., 178 Fed. 84;

Chicago Woodenware Co. v. Miller Ladder Co., 133 Fed. 541.

Louden Machinery Co. v. Strickler, 195 Fed. 751; on page 756 the court says:

"Elements in claims should be read with reference both to the structure and the function given in the description of the invention. Dictionary definitions should not be applied to words in claims if the patentee in and by his drawings and descriptions of parts and functions, has clearly supplied his own dictionary."

Herzog v. N. Y. Telephone Co., 172 Fed. 425:

"While the invention of a patent must be measured by the claims, yet they cannot be considered to the exclusion of the specifications, but claims, specifications, and drawings showing the particular apparatus must be considered together, and must point out the principle by which the invention is practically operated, and, to make out a case of infringement, the apparatus of defendant must embody such a principle of operation." (Syll. 1.)

"The claims of a patent are to be construed in the light of the specifications, and while, when plain and specific, they cannot be extended, they MAY BE LIMITED THEREBY, and a claim is not to be defeated because it is broad in its language, when IT IS LIMITED BY THE SPECIFICATION, and susceptible of limitation." (Syll. 1.)

Dey Time Register Co. v. W. H. Bundy Recording Co., 169 Fed. 807.

Prof. Cory correctly refers to the lever arm 26 as the "circuit controller" of claim 5, but erroneously includes lever 43, pivoted at 43a, which last named element is mentioned in the same claim as a "circuit closer."

The lever 43 obviously cannot be considered as part of the element of claim 5 mentioned as a "circuit con-

troller", as it is mentioned as a separate element and described as a "circuit closer" operatively connected with the aforesaid circuit controller, and adapted to energize said magnet on movement of the "circuit controller" in either direction.

A returning device is described and claimed in the patent in suit, and it is stated at lines 3-4, page 4 of the patent specification that its operation is to return lever 26 to normal position; it does not state anything about returning solenoid 33 to normal position.

It would not be proper to state that solenoid 33 is returned to any position or to normal position, solenoid 33 has a fixed and immovable position. Its core 35 being properly referred to only as a solenoid core and being so designated, wherever spoken of in the patent, is the only part of the mechanism which is movable.

In claim 3 of the patent "a controller" is claimed and a "returning device for said controller." This being read in connection with the express statement of the patentee that the "returning device" returns the lever 26 to normal position, and considered in connection with the obvious fact that the solenoid 33 cannot be returned to normal position, being immovable, compels the conclusion that the lever 26 is the "controller."

At line 7, page 4 of the specification of the Lyndon patent, it is distinctly stated that the lever 26 is the element that is returned to normal position by said returning device.

In claim 4, "a returning device for said controller" is called for showing clearly that lever 26 is the controller."

COMPLAINANT HAS FAILED ABSOLUTELY TO SHOW IN DEFENDANT'S DEVICE ANY "CONTROLLER" WITHIN THE MEANING OF CLAIMS 3, 4, 5, 8 AND 9 OR ANY MECHANICAL EQUIVALENT THEREOF. Complainant ignores the fact that the lever 26 is the "controller" of the claims.

Mr. Henry, when not referring to any special claim, evidently takes "controller" to mean the same thing in all the claims, as in fact it does. [Record, Vol. 1, page 216, lines 16-17.] It should be noted that he makes no distinction between the "controller" of claim 4 and the "controller" mentioned generally in a previous comparisons which evidently was intended to apply to all the claims. [Record, Vol. 1, page 382, Q. 369-371.] HENRY HAS NOT ATTEMPTED TO POINT OUT ANY MECHANICAL EQUIVALENT OF SAID LEVER 26. Complainant has insisted (contrary to the express provisions of the specification and claims of the Lyndon patent) that solenoid 33 was the "controller", and thus endeavors to confuse the plain meaning of the patent.

The controller 26 and the solenoid 33 are two separate and distinct elements in the claims of the patent in suit.

Prof. Cory has pointed out the cylinder marked B on blue print KKK as the "controller for said operating means" of claim 3. [Record, Vol. 2, page 461, Q. 326.] It is obvious that the cylinder B on blue print KKK is not the mechanical equivalent of lever 26. It does not perform any of the functions of lever 26. The cylinder is a stationary part, while the

lever is a movable part. The lever makes and breaks electric connections, while the cylinder does nothing of the kind. The cylinder B on Exhibit KKK does not operate in substantially the same manner. *There is no comparison that seems possible as to mode of operation, they are entirely different elements.* Obviously they are not substantially the same means.

The testimony on behalf of complainant is inconsistent, in that (*with considerable variation*) the cylinder and certain of its parts controlling the flow of fluid under pressure has been pointed out as the equivalent of *both* the lever 26 and the solenoid 33 and the magnets 15 and 16.

In answer to Q. 248-250 [Record, Vol. 1, page 330], Mr. Henry points out part marked controller on Exhibit Z-Z as the equivalent of the solenoid 33, but mistakes solenoid 33 for magnets 15 and 16. While in answer to Q. 300-301 [Record, Vol. 2, page 453], Prof. Cory points out as equivalent of solenoid the *pair of pistons only* within the cylinder. (Exhibit KKK.) Prof. Cory shifts from his first position that *the pistons only* were the equivalent of the solenoid 33, and points out the cylinder -B- on Exhibit KKK *but departs completely from his former testimony by pointing out the pipes D-D on said Exhibit KKK as equivalent of the electromagnetic device “(solenoid 33)”* [Record, Vol. 2, pages 493-4, Q. 407-410], and then Prof. Cory contradicts himself and comes back to the proposition that solenoid 33 finds its equivalent in cylinder marked B on Exhibit KKK. [Record, Vol. 2, page 517, Q. 484-486.] Thereafter, in answer to Q. 508-9 [Record, Vol.

2, page 526], Prof. Cory again *shifts to the position that the two pistons, distinctly pointed out by him [Record, Vol. 2, page 453, Q. 300 and 301] as equivalent of solenoid 33 are to be considered as an equivalent of contacts carried by lever 26, the comparison, however, leading to the absurdity of having the contacts directly carried by the core of the solenoid and thus eliminating entirely controller lever 26.*

The weight of evidence as well as the weight of reason preponderate on the side of the defendant.

E. S. Cobb testifies that there is no such controller nor its equivalent in defendant's device. See Record, Vol. 2, pages 553-4, Q. 109; page 655, lines 14-19; page 659, 4th line from bottom of page; page 661, lines 12-14.

S. L. Berry testifies that there is no such controller nor its mechanical equivalent in defendant's device. See Record, Vol. 3, page 1063, answer to Q. 198; Vol. 4, page 1466, Q. 1445-6; page 1366, Q. 1099-1109; page 1434, Q. 1389.

Returning Device.

In defendant's device there is no "returning device" for said controller, as called for by claims 3 and 4; nor any "returning device" adapted, when operated to return the circuit controller to normal position, as called for in claim 5 of said patent. The language in each of these claims refers to the same mechanical element, namely: the rod 25. *It is distinctly so stated in the patent specification, line 12, page 12:*

"A returning device consisting of a rod 25, connected by a pivoted link or connecting-rod 25a

with the disk 22, passes through a hole in the controller-lever 26, pivoted at 26a to a fixed support, and through a fixed abutment or frame piece 30.”

Complainant's witness Prof. Cory admits this. [See Record, Vol. 2, page 461, Q. 327, *et seq.*]

The term “returning device” in each of the claims 3, 4 and 5 of the patent in suit cannot be construed to include either the clutch disks 22-23 or the magnet 32. The fact that Lyndon in one instance, rather confusingly refers to clutch disk 22 23 and magnet 32 as constituting a “returning device” (specification, page 3, lines 116, *et seq.*), does not alter this fact. Magnet 32 is not a part of the returning device. *It is spoken of at line 13, page 4 of the specification as a “clutch magnet” for the “returning device.” It is claimed as a separate element in each of the claims, namely: claims 3, 4 and 5 in which the returning device is claimed as an element. Disks 22 and 23 are not part of the returning device. In each of the claims in which the returning device is called for, namely: claims 3, 4 and 5, disks 22 and 23 are claimed as a separate element, namely: as a clutch” or “clutch connection,” in claims 3 and 5, and is included as part of the actuating means controlled by said “controlling means” in claim 4.*

When the patentee uses the term “returning device” in his specification and claims, he thus means simply a rod centered by springs and attached at one end to a clutch.

The term "returning device" is a most vague and general term as a very large proportion of mechanical parts might be referred to as "returning devices."

The insufficiency of language to adequately describe mechanical devices is recognized by the statutes of the United States, and rules of the Patent Office requiring drawings and illustrations. In order that an inventor may not by the use of vague and general expressions be granted a monopoly over things he has not really invented, his drawings must be referred to and read with his descriptions.

It is not the law that the function of a device alone may be monopolized.

O'Reilly v. Morse, 15 How. 62;

Diamond Match Co. v. Ruby Co., 127 Fed. 341,
348;

Corning v. Burden, 15 How. 252;

Dryfoos v. Weise, 124 U. S. 32;

Westinghouse v. Boyden Power Brake Co., 170
U. S. 537;

Goshen Co. v. Bissell Co., 72 Fed. 67;

National Brake Shoe Co. v. Interchangeable
Co., 106 Fed. 693;

Union Co. v. Diamond Co., 162 Fed. 148.

In *Reis v. Barth Mfg. Co.*, 136 Fed. 850, the Circuit Court of Appeals for the Seventh Circuit says:

"Where a new result has been attained by some patentable mode of operation, the patentee cannot have a monopoly of the new result. It is open to anyone to devise and patent a new means of producing the same result—a means that has

a different principle of operation,—and one who succeeds in doing this is not an infringer of the older patent.” (Page 853.)

Only the specific means or its clear mechanical equivalent is protected by a patent claim.

To grant complainant a monopoly over every means which might, by any straining of language be called a “returning device” without reference to the specific device illustrated in his drawing would be to grant him a monopoly of a function or result.

The question before the court is whether there is found in defendant’s device any rod like that illustrated at 25, in the drawing of the patent in suit, centered by springs and connected at one end with the disk of a clutch.

It is important to determine first what the function and purpose of this rod 25 is in order that we may then compare the elements of defendant’s device which have been suggested as its equivalent.

The purpose and function of this rod 25 (designated as “a returning device” in the claims) is clearly stated by Lyndon to be to prevent the governor from over-running.

The specification of the Lyndon patent is most clear and explicit as to the function of this rod 25.

“The rod 25, disks 22 and 23, and the controlling clutch-magnet 32 constitute a returning device for preventing the governor from over-running—that is, moving the water-wheel gate a greater distance than is actually necessary for proper regulation—thus necessitating a second movement of the gate in an opposite direction,

which in turn may overtravel and require the gate to be moved back again.”

Lyndon patent specification, pages 3, lines 116-125.

There is no rod 25 in defendant's device. Nor is there any equivalent thereof. Mr. Henry has contradicted himself in attempting to point out in defendant's device a mechanical equivalent for such rod 25. These many contradictions in the testimony of appellant Henry must serve to emphasize the radically different mode of operation, principle of organization, and interrelation of elements making up defendant's device. These several contradictions serve to emphasize the extreme stretch required on the part of appellant in his attempt to compare defendant's device with that of the Lyndon patent, either as a whole, or element for element of any of the claims of the Lyndon patent.

Mr. Henry points out on Exhibit KK (1) a dash pot, (2) associated parts shown close to the fly balls, (3) each of the rod and lever connections to the water gate operating shaft and to the controller; (4) the actuating rack, and (5) pinion; (6) vertical stem on which pinion is placed; (7) tension spring with its fingers; (8) needle valve of the dash pot with its port as means for preventing the governor from over-running in the device of defendant. [Record, Vol. 2, page 414, Q. 463.]

If Mr. Henry is correct, then *all* these parts must be included under the term “returning device” if it is to be applied to any of the mechanism used by defendant.

In answer to Q. 88 [Record, Vol. 1, page 135, lines 12-16], Mr. Henry points out on Complainant's Exhibit E, Cottonwood Plant, as equivalents of the "returning device," (1) rod connection K, links and piston rod L and refers to the "clutch" forming part of said "returning device" as the part M.

In answer to Q. 140 [Record, Vol. 1, page 218, lines 10-13], Mr. Henry points out the "returning device" (on Division Creek Exhibits H, I, J, K, and L), as XX and UU and finds equivalent of the clutch at ZZ.

(Note: X-X are rod connections pointed out on Exhibit ZZ as a mechanical circuit.) In the last three lines on page 219 Mr. Henry *adds* the valve YY to the parts he has previously pointed out as the equivalents of the "returning device" stating that it is the "clutch" ZZ with its automatically controlled valve YY which returns the controller to inoperative position so as to prevent excessive movement of the governor.

Subsequently Mr. Henry marks on Complainant's Exhibit ZZ (1) the rack, (2) pinion, and (3) apparently the rod to which the pinion is secured as the mechanical equivalent of the "returning device" indicated at the same time by encircling with a red pencil the mechanism for controlling the opening of the valve permitting the flow of liquid from one side of the piston to the other as the "clutch connection" of said "returning device" [See Record, Vol. 1, page 332, Q. 258, *et seq.*]

(Note: *It should be noted that Henry has omitted from this designation "each of the rod and lever connections to the water gate operating shaft" pointed*

out by him as means for preventing the governor from overrunning. [Record, Vol. 2, page 414, Ans. to Q. 463.]

In answer to Q. 258 [Record, Vol. 1, page 332] Mr. Henry shifts his position. First he has pointed out distinctly a means for varying the flow of liquid from one side of the cylinder to another as the "clutch" of the "returning device." Then in answer to this Q. 258 he encircles in red the alleged equivalent of this "clutch." Next, in answer to Q. 259 Mr. Henry shifts from the valve controlling means which he has encircling in red on Exhibit ZZ to the dash pot, *and he has stated distinctly that this dash pot is the clutch.*

IN ANSWER TO Q. 264, PAGE 334, HE DISTINCTLY STATES IN CONTRADICTION OF HIS FORMER TESTIMONY, THAT THE (1) PISTON, (2) PISTON ROD, (3) CYLINDER WITHIN WHICH THE PISTON OPERATES, (4) BODY OF FLUID CONTAINED THEREIN IS THE EQUIVALENT OF THE "CLUTCH CONNECTION" OF THE "RETURNING DEVICE."

In his answers to Q. 266, Mr. Henry uses the part encircled with a red pencil on Exhibit ZZ as theretofore pointed out distinctly as the "clutch" and so marked on Exhibit ZZ as "means actuated by said controller on movement thereof from normal position to engage said clutch with such shaft" (magnet 32).

In answer to Q. 273-4, Mr. Henry refers again to the marking on complainant's ZZ as indicating the "returning device."

In answer to Q. 276, Mr. Henry points out "a clutch adapted to bring said returning device into operative connection with the water-gate-operating shaft" as the

element marked on Exhibit ZZ “means actuated by said controller.”

Mr. Henry testifies in effect that in defendant’s device the part encircled by red pencil on Exhibit ZZ must not only be *the equivalent of the “clutch,”* but also is *the equivalent of the magnets 32 and its connections described as “means actuated by said controller, * * *”*

Appellant’s witness, Prof. Cory, has contradicted himself and has contradicted complainant Henry in his endeavor to point out in defendant’s device the mechanical equivalent of the returning device, rod 25 of the Lyndon patent in suit.

In answer to Q. 237 [Record, Vol. 2, page 434, lines 5, *et seq.*], Prof. Cory points out the automatically controlled dash pot as the “returning device.”

In answer to Q. 328 [Record, Vol. 2, page 461] Prof. Cory points out the elements in defendant’s device which he considers as mechanical equivalents of “returning device” for said “controller” within the meaning of claim 3. As here pointed out they are: (1) dash pot E on Exhibit KKK, (2) mechanical parts connected therewith, (3) *especially the rack marked on Exhibit KKK. F.*

Prof. Cory points out in defendant’s device as the alleged equivalent of the “clutch connection” of said “returning device” the part marked with the letter e of blue print KKK. [Record, Vol. 2, pages 461-464, Q. 328-342.]

PROF. CORY ON REBUTTAL COMPLETELY CONTRADICTS HIMSELF (AND ALSO CONTRADICTS HENRY) IN HIS AT-

TEMPT TO POINT OUT A "CLUTCH CONNECTION" OF THE "RETURNING DEVICE."

In his answers to Q. 878-883, Prof. Cory confuses clutch connection of claim 3 with the reversing gear. [Record, Vol. 7, pages 2407-11.] On redirect he changes his testimony. [Record, Vol. 7, pages 2419-2421, RDQ. 901-904.] But see his further testimony on recross-examination, particularly answers to RXQ. 925-954, pages 2427-2448; RXQ. 957-967, pages 2450-5; RXQ. 971-2, page 2457.

The question before the court is whether there is found in defendant's device the rod like that illustrated at 25 of the patent in suit centered by springs connected at one end with the disk of a clutch.

Defendant's expert, Edward S. Cobb, says, in answer to Q. 109:

"'A returning device for said controller' is not found in connection with the controller responsive to changes of speed CC, because the positions of the parts of CC assumed for any given speed remain the same, while the speed remains the same, and there is no return until the speed has changed, and hence I do not find the returning device for said controller." [Record, Vol. 2, page 653.]

See also Record, page 655:

"There is no returning device in the speed-measuring device CC in Exhibit J and CC in Exhibit H which returns to a former position by any other means than a change of speed."

See also page 656:

“There is no similarity whatever in the mechanism shown in the exhibits and the mechanism described in the patent either with regard to the means employed or principles of operation, and they are neither one the mechanical equivalent of the other, both showing an entirely distinct and different method of controlling the gates of the water-wheel in conjunction with the control of the gate of the valves in the by-pass from the penstock carrying water to said water-wheel.”

Defendant's expert, S. L. Berry, states that in defendant's device there is not any “returning device for said controller provided with actuating means controlled by said controlling means to return the controller to inoperative position so as to prevent excessive movement of the governor.” [Answer to Q. 218, Vol. 3, page 1085.] See also Mr. Berry's answer to Q. 217; also Q. 1391-1397, pages 1435-1436; answer to Q. 211, pages 1074-77.

Claims 6 and 7.

It is appellant's contention that these claims are so broad in their terms that they may be read upon defendant's device. That these claims are not to be construed in the light of the Lyndon specification and disclosure. That these claims are not by law limited to a combination of devices for the specified purpose which co-operate in the same manner and under the same principle of operation to produce substantially the same result in substantially the same way as the devices shown and described in the patent, but

cover *any and all means* for accomplishing such result so long as the words of the claims can in some manner be applied to the device sought to be covered by such claims.

That the claims are broad enough, considered apart from the Lyndon specification, to include defendant's device, does not conclusively show infringement.

Westinghouse v. Boyden Power Brake Co., 170 U. S. 537;

Lovell v. Seybold Machine Co., 169 Fed. 288, 290;

Edison v. American Mutoscope & Biograph Co., 151 Fed. 767, 773.

As said by the court in General Electric Co. v. Allis-Chalmers Co., 171 Fed. 666, at 669:

"The fact, however, that defendant's device may be within the language of the claim does not of itself prove that it is an infringement. Infringement is not a mere matter of words."

Goodyear Shoe Mchy Co. v. Spalding, 101 Fed. 990, 994.

As said by the Supreme Court in the Westinghouse case (*supra*):

"The patentee may bring the defendant within the letter of his claims, but if the latter has so far changed the principle of the device that the claims of the patent, literally construed, have ceased to represent his actual invention, he is as little subject to be adjudged an infringer as one who has violated the letter of a statute has to be convicted when he has done nothing in conflict with its spirit and intent."

The Lyndon patent is not entitled to every possible kind of means that might be suggested for operating the water gate in either direction. To construe the patent so broadly would be tantamount to granting Lyndon a monopoly on a function and on a result rather than means for performing that function or accomplishing that result. Such a patent or claim would be void.

Plunger Elevator Co. v. Standard Elevator Co.,
153 Fed. 747;

Corrington *et al.* v. Westinghouse Air Brake
Co., 173 Fed. 69, 78.

Weed Chain Tire Grip Co. *et al.* v. Excelsior
Supply Co., 179 Fed. 232;

Continental Automobile Co. v. A. G. Spalding
and Bros., 177 Fed. 693;

Arnold v. Tyden, 193 Fed. 410 (summarizing
holding in the paper bag case, 210 U. S. 405);

Hildredth v. Lauer & Sutter Co., 204 Fed.
792;

Monash Younkes Co. v. National Steam Specialty
Co., 208 Fed. 559;

If Lyndon's claims 6 and 7 are construed as covering any and all means for accomplishing the result of operating the by-pass valve inversely to the operation of the water gate the claims are void as attempting to cover a function.

Drum v. Turner, 209 Fed. 854-856;

Eastern Dynamite Co. v. Eastern Powder Mfg.
Co., 164 Fed. 47-58;

Queen & Co. v. Friedlander & Co. *et al.*, 149
Fed. 771.

The specific means illustrated in the Lyndon drawings and described in his specification *must be read into his claims* in order to avoid the necessity of construing them as functional and void.

General Sub-construction Co. v. Netcher, 167 Fed. 549.

The Lyndon claims should be strictly and narrowly construed because the Lyndon device has never gone into use.

National Malleable Casting Co. v. Buckeye Malleable Iron & Coupler Co., 171 Fed. 847-853;

Westinghouse Electric & Mfg. Co. v. Toledo P. C. and L. Ry. Co., 172 Fed. 371;

Kestner Evaporator Co. v. American Evaporator Co., 182 Fed. 844.

The *impracticability* of the Lyndon structure (even if we assume for the purpose of argument that the device is operative) would be sufficient to require a strict and literal construction.

In *Wilson Trolley Catcher Co. v. Frank Ridlin Co.*, 173 Fed. 308, a broad claim based upon an *impracticable, though operative structure* construed and held either to be so broad as to be invalid or limited to *substantially the construction shown and described*.

Severy Process Co. *et al.* v. Harper & Bros., 113 Fed. 581.

A patented device never used in an art should not be allowed to dominate the art.

Stromberg Motor Device Co. v. Parker, 204 Fed. 462;

Boston Woven Hose & Rubber Co. v. Pen Rubber Co., 164 Fed. 557.

Where the circumstances of the case require such a construction, courts do not hesitate to limit a patentee, *not only to the exact means described in the specification and illustrated in the drawing, but to the precise form of those means.*

Singer Mfg. Co. v. Crammer, 192 U. S. 265.

To be the mechanical equivalent of Lyndon's means for operating the water gate in either direction, defendant's mechanism *must not only produce an analogous result, but must do so in substantially the same manner and by substantially the same means.*

Imperial Bottle Cap and Machine Co. v. Crown Cork & Seal Co., 139 Fed. 312.

The important elements in the Lyndon device which come within the description of "means for operating the water gate in either direction" are the gear wheels 9, 10 and 11 and the sleeve 13 which in many of the other claims of the patent has been referred to as "*reversing clutch gear.*"

We have shown that neither such reversing clutch gear, nor its mechanical equivalent, is found in defendant's device.

We have shown that construing the patent in the light of the specification and drawings, there is no driving shaft in defendant's device.

Both driving shaft and reversing clutch gear constitute very vital elements composing "means for operating the water gate in either direction," and there are no such elements to be found in defendant's device.

There is no "By-pass valve" or its equivalent in defendant's device. Complainant admits this contention by insisting that the plug cock valve of the Bakersfield device is not the equivalent of Lyndon's butterfly valve.

As a matter of fact the butterfly valve of Lyndon resembles the plug cock valve of Bakersfield to a much greater degree than Lyndon's valve resembles the needle valve of defendant's device. Both butterfly valve and plug cock valve are rotating valves. It is obvious that a butterfly valve could be substituted in the Bakersfield installation with very slight changes of form of the casing. Butterfly valves were very old and well known prior to Lyndon's invention.

See testimony of S. L. Berry, Record, Vol. 3, page 990, Q. 116-118; E. S. Cobb, Record, Vol. 3, page 882, Q. 828-830.

Radical changes would have to be made in the form of the Lyndon by-pass and main water gate to permit the use of needle nozzles. The changes would amount substantially to reorganization and rearrangement amounting to new invention.

Not only must the form of the main gate and by-pass valve be changed to permit the use of needle nozzles, *but the whole chain of operating devices must be substituted.*

The reciprocating motion of the needle of the “auxiliary relief nozzle” of defendant’s device is different from the rotary motion of the Lyndon valve.

The plug cock valve of the Bakersfield device and Lyndon patent are what are known as balanced valves, while the needle of defendant’s device does not come within the description of a balanced valve. Its valve principle is different.

Cobb, in his report, defendant’s exhibit Cobb and Hesselmyer report of August 8, 1896, at line 11, page 5, refers to the by-pass valve of the Bakersfield device as “balanced valve.” See also testimony of appellant’s witness, W. W. Wilson, Record, Vol. 6, pages 2265-2272, XQ. 199-214.

French Patent.

If the Lyndon claims are not limited to an *electro-MECHANICAL* device, substantially as shown and described in the Lyndon specification and drawings, Defendant’s Exhibit French Patent is a complete anticipation of the Lyndon patent in suit.

The device of this exhibit is explained by defendant’s witnesses Edward S. Cobb [Record, Vol. 2, page 621, Q. 83-88] and S. L. Berry [Record, Vol. 3, page 956, Q. 64-69].

The purposes, functions and results of both the device of the Lyndon patent and that of Defendant’s Exhibit French Patent are identical. [Testimony of E. S. Cobb, Record, Vol. 2, page 627, Q. 86-87.]

Claims 6 and 7 of the Lyndon patent read literally on Defendant’s Exhibit French Patent. See testi-

mony E. S. Cobb, Record, Vol. 2, pages 626-8, Q. 86-87, and S. L. Berry, Record, Vol. 3, pages 963-967. Q. 68-69.

Swiss Patent.

If the Lyndon claims are not limited to an *electro-mechanical* device, substantially as shown and described in the Lyndon specification and drawings, Defendant's Exhibit Swiss Patent is a complete anticipation of the Lyndon patent in suit.

Defendant's witnesses explain said Swiss patent. See testimony of E. S. Cobb, pages 629-632, Q. 88-89, and S. L. Berry, Record, Vol. 3, pages 949-952, Q. 57-58.

Defendant's witnesses compare the disclosure of said Swiss patent with Lyndon's patent. See Record, Vol. 2, pages 638-642, Q. 95-98, and Vol. 3, pages 952-955, Q. 59-63.

Claims 6 and 7 of the Lyndon patent read literally on Defendant's Exhibit Swiss Patent. Testimony of E. S. Cobb, pages 639-641, Q. 96-97, and S. L. Berry, pages 953-956, Q. 63.

The Bakersfield Device.

Unless complainant is limited to the specific form of device illustrated in his drawings and described in his specification, claims 6 and 7 of the Lyndon patent are void.

They are clearly anticipated by a water wheel governor publicly used at the plant of the Power Development Company near Bakersfield in 1896 and 1897 and subsequently thereto. See testimony of Edward S. Cobb, Record, Vol. 2, page 557; pages 568-593, Q. 18-

58; pages 599-606, Q. 63-73; pages 632-637, Q. 90-94; testimony S. L. Berry, Record, Vol. 3, pages 967-972, Q. 70-80; pages 1001-1002, Q. 136-140; testimony of B. C. Van Emon, Record Vol. 4, pages 1247-1299; testimony of J. A. Lighthipe, Record, Vol. 4, pages 1509-1539.

See defendant's exhibit, "Journal of Electricity, Vols. 4 & 5," in which appears under date of August, 1897, a full description with illustrations of this Bakersfield installation. This exhibit is proven by testimony of Peter H. Ducker, Record, Vol. 3, pages 893-6; E. B. Strong, Record, Vol. 3, pages 934-938, and S. L. Berry, Record, Vol. 3, pages 995-1000, Q. 123-135.

The Bakersfield governor was a highly efficient governor and performed the functions of its design in a most satisfactory manner.

E. S. Cobb, Record, Vol. 2, page 583, Q. 33; page 600, answer to Q. 64; page 612, next last sentence in answer to Q. 76; page 728, Q. 301; page 745, Q. 352; and page 823 where appears the following:

"Q. 630. Well, if you were asked to set up a water-wheel governor or governing mechanism combining a water-gate with a by-pass valve and a governor *per se*, so inter-related that the by-pass valve operated inversely to the operation of the water-gate, you would be able to lay that out on the board?

A. I think so, and if I wanted to point to a design of that character which I know was successful in operation and which was never excelled as a water-wheel governor, I would point you to the design shown in the plant of the Power Development Company at Bakers-

field as it was originally laid out, in its principles of construction and operation.”

Defendant's expert, S. L. Berry, testifies:

“Q. 26. State whether or not the device which you have mentioned as having been designed in 1896 for use at Bakersfield employed a speed-governor, and, if so, describe it briefly.

A. The mechanism designed for use at Bakersfield was operated by a governor which responded to load and speed changes. It was in effect a transmitting dynamometer which took a definite position in response to a definite load. This position was modified slightly by any speed variation which occurred. The by-pass valve was an extremely necessary part of the equipment, inasmuch as the rapidity of action of this governor made its operation impossible without the by-pass feature. It was at that time very much quicker in action than any governor on the market. It was a result of this quickness which led to the development of the by-pass mentioned. The first installation of this by-pass was put on as a second thought when the governor proved so rapid in action that the inertia effects rendered governing out of question. It was a complete remedy for an intolerable condition.” [Record, Vol. 3, page 908.]

“The object and result of this construction was to enable a prompt and accurate governing of the amount of power on the wheels, without the disturbance of flow or pressure in the main conduit. This object was fully attained by the plant under discussion. The parts were so adjusted that when the water-wheel gates were

fully opened the by-pass valve was fully closed, and *vice versa*.

Q. 111. As a governing mechanism, state whether or not the device which you have described attained the object and result aimed at by its designers.

A. The mechanism as installed near Bakersfield attained in the most complete and satisfactory manner the governing action aimed at and exceeded by considerable margin the guaranties made in that connection.

Q. 112. By Mr. Westall: After the first installation, state whether or not any changes in construction or adjustment of the different parts were made, and, if so, state the nature and extent of any changes which were made in the governing device as originally designed and installed.

Q. 113. By Mr. Westall: The question is withdrawn. State whether to your knowledge any changes in adjustment or construction of the different parts were made after the first installation of the device about which you have testified.

A. The only changes made in this mechanism within my personal knowledge resulted from the non-realization of very positive statements to us that the water of the Kern River at that point was entirely clear of grit or other foreign matter. This assurance to us was of such a nature that we felt justified in operating the balanced valve and hydraulic cylinder from the conduit line. After trial it developed that this water was far from free from such foreign matter, and it became necessary to substitute oil under pressure to the balanced valve 24 and cylinder 25. This was done by

driving a forcepump from the water-wheel shaft 8, supplying oil under pressure to the valve 24 and cylinder 25. This same condition of contained grit or sand rendered the operation of the by-pass valve 41, as originally constructed, somewhat difficult. This trouble was remedied by me at the plant by adding to the end of the moving portion 41 of the by-pass valve a support on the center thereof to sustain in part the weight of the said moving portion 41. This change completely obviated any difficulty in this by-pass valve during the time I remained at the plant. A device of this nature if exposed to the flow of water containing sand or grit must necessarily wear, as do all hard substances exposed in like manner. The remedy in this case under conditions involving gritty water would be to make the moving portion 41 somewhat smaller than the bore of the containing portion 43. This condition is one which could be provided by the original manufacturer, and is one which will naturally produce itself in operation.” [Record, Vol. 3, pages 987-989.]

On cross-examination Mr. Berry testifies:

“Q. 572. You know, do you not, that that combination as installed at the Power Development Company plant in Bakersfield or near Bakersfield was wholly inoperative, and that it never did successfully work, and that the Girard wheel installation including the by-pass was taken out, discarded and sold as junk, within two months after it was received and set up at the point of installation?

A. In answer to part of the question, I know nothing of the kind. In fact the plant operated with ex-

treme satisfaction as to governing, as to the by-pass action. The sole reason why this machinery was discarded was on account of the low efficiency of the Girard wheel," [Record, Vol. 3, pages 1188-89.]

On redirect:

"A. The governor and by-pass as installed by the Girard Water Wheel Company for the Power Development Company at Kern River performed their functions completely and satisfactorily. There was never any question to my knowledge as to the highly satisfactory nature of the governing. The fact that the governor was continued in use after the removal of the Girard wheels on account of low efficiency would show the highly satisfactory nature of this service, and the fact that the by-pass valve may have been removed at that time, or was not used after that time, does not come into the question at all for the simple and very strong reason that the Tuthill wheels which immediately succeeded the Girard wheels in this plant did not require and could not use a by-pass valve located as this one was originally, for the reason that the deflecting plates used on that wheel performed this function." [Record, Vol. 4, pages 1443-1444.]

See also testimony of B. C. Van Emon, Record, Vol. 4, page 1274, Q. 130-134; pages 1283-1285, Q. 201-209. J. C. Lighthipe testifies:

"There were no changes made in the governor. The governor gave perfect satisfaction and governing remarkably well up to the capacity of the water-wheel." [Record, Vol. 4, page 1513, Q. 17.]

See also testimony of complainant's witness Chas. B. Sessions, Record, Vol. 5, pages 1724-25, Q. 79-83. Complainant's witness Carroll N. Beal testifies:

"RXQ. 75. And the main reason for discarding the Girard wheel was that it would not give the power?

A. The Girard wheel would not give the power; that was the main reason. And in the low outputs regulated. In the higher outputs of its capacity it did not regulate. *I want to say this, as I recall the thing, and that is, that owing to the inability of both the Girard wheel and the Tuthill wheel to give the necessary required output, the governing system of those was not tried out as thoroughly as it otherwise would have been.*

RXQ. 76. By Mr. Westall: That is the Girard and Tuthill?

A. Both. *The fine governing features were not tried out as they would have been tried out had the power output been there.*

RXQ. 77. So that the failures of the wheels to give the required efficiency was the main and primary cause of their being discarded?

A. If you don't get the power it don't make any difference how well they are regulated. Power was the primary *sine qua non*. Regulation was to follow." [Record, Vol. 5, page 1740.]

Unquestionably this governor was a complete success and completely and satisfactorily performed its functions. It was taken out,—*not because of any inefficiency of such governor*,—but because the Girard water wheels were removed. But the governor was a

complete success and this was a successful prior use of such governor. There is no evidence upon which to base a finding that this governor was discarded or abandoned *because it failed*. Appellant's assertion to such effect is wholly unwarranted.

It is not true that the governor and by-pass mechanism installed by the Power Development Co. in 1896 and 1897 at Bakersfield was a mere experimental use and abandoned experiment.

The evidence is very clear that identically the same device was thoroughly tested and tried out and successfully used several years before the Bakersfield installation. [See testimony of S. L. Berry, Record, Vol. 3, pages 1065-1068, Q. 201-205; pages 1184-1188; Q. 556-570; B. C. Van Emon, Record, Vol. 4, pages 1275-1278, Q. 141-156; pages 1285-1295, Q. 212-264; S. L. Berry, Record, Vol. 4, pages 1341-1345, Q. 1001-1013; page 1385, Q. 1198; page 1417, Q. 1314; page 1452, Q. 1414.]

The testimony of Mr. Dearth, the witness upon whom complainant seems to place most reliance in the attempt to show that the Bakersfield governor was not successfully used, *corroborates in a large part the testimony of Cobb, Berry, Van Emon, Lighthipe, Beal and Sessions as to the reasons why the use of the governing apparatus in question was not continued. The failure of the Girard wheels to develop the required efficiency was the cause of their removal.* [See Record, Vol. 5, pages 1675-1676, XQ. 302-306.]

Mr. Dearth testifies:

“XQ. 374. The reason the Girard wheel was taken out was because it did not develop the required horsepower?”

A. *Yes, sir; that is the reason.*

XQ. 375. By Mr. Westall: And it is also true that when the new wheel was put in it had a method of governing which did not require the use of a by-pass. Is that true?

A. When the Tuthill wheel was put in; yes, sir.” [Record, Vol. 5, page 1694.]

“Q. 119. How did the generators operate when driven by the Girard wheels, with respect to efficiency?”

A. The best efficiency of a generator is its normal load. We never could deliver to exceed, if my recollection serves me right, about 40%, or, possibly, 50%, of the real load of the machine.

Q. 120. What do you lay that to?

A. *Inefficiency of the water-wheel. It could not deliver the goods.*

Q. 121. You mean 40% efficiency from one of the wheels?

A. Well, give it the advantage of all there is and say 50%.

Q. 122. From one of the wheels?

A. From one of the wheels. My recollection is that it was less than that. I know it was a very great disappointment.” [Record, Vol. 5, page 1650.]

“Q. 154. What was used for governing the flow of water to these Tuthill wheels?”

A. The same device up to the hydraulic engine; beyond that there was a different device on the water-wheel.

Q. 155. What was the nature of that device?

A. It was in the nature of a baffle-plate shut over the nozzle.

Q. 156. How were those baffle-plates operated?

A. By this hydraulic engine.

Q. 157. Were they at any time hand operated?

A. Oh, yes.

Q. 158. Was any by-pass or relief device used on the pipe-line in connection with these Tuthill wheels?

A. No; it was not necessary.

Q. 159. Why?

A. The water was not shut off in any sense of the word, but just deflected from the wheel.

Q. 160. In other words, if I am correct, the flow of water to the wheels was not changed in volume?

A. Not at all." [Record, Vol. 5, pages 1654-1655.]

B. C. Van Emon, a manufacturer of elevators at San Francisco and totally disinterested in this case, testifies on cross-examination by appellant's counsel:

"Q. 69. What part of the Girard wheels was it that to your mind was deficient in proper action?

A. The nozzles and also the wheel.

Q. 70. You know that those wheels and the by-pass valve were taken out of that plant very soon after they were put in there, do you not?

A. No; they were not.

Q. 71. Are you sure of that?

A. Yes.

Q. 72. How long do you think they were in there?

A. They were in there some little time after the Girard wheels were taken out.

Q. 73. What was in there?

A. The by-pass and governing mechanism.

Q. 74. Do you mean the by-pass valve or the casing of the by-pass valve which you referred to yesterday?

A. The valve and casing.

Q. 75. Do you know that the opening from the by-pass valve casing to the tailrace was sealed up in not many months after the Girard wheels were first attempted to be operated?

A. No, sir; they were not.

Q. 76. Are you sure it was not sealed up?

A. Sure. I had absolute charge of the whole proposition." [Record, Vol. 4, pages 1265-1266.]

S. L. Berry testifies:

"There was never any question to my knowledge as to the highly satisfactory nature of the governor," etc. [Record, Vol. 4, page 1444.]

Claims 6 and 7 of the patent in suit read literally upon this Bakersfield governor. See testimony of E. S. Cobb, Record, Vol. 2, pages 606-612, Q. 74-76; testimony of S. L. Berry, Record, Vol. 3, pages 992-995, Q. 121-122.

There is a much closer correspondence both in mechanical parts, interrelation of parts, and principles of action or mode of co-operation of the parts or elements of this Bakersfield governor and of defendant's governors, than there is between the device of the Lyndon patent in suit and the defendant's devices. Defendant's governors and the Bakersfield governor are purely mechanical and *not electromechanical*.

The Lyndon invention was not copied by either the Bakersfield installation nor by defendant. The Lyndon invention was a mere paper theory. It never came into actual existence. The art in no wise is indebted to Mr. Lyndon. Defendant's governor was an independent invention,—operating upon a distinct and independent principle and with a mode of operation distinct from that dreamed of by Mr. Lyndon. Mr. Lyndon's conception was the use of electric devices. His dynamo 8 was an important feature which to a great degree characterized his theory. His governor was not conceived with the idea of water economy. It depended upon a normally half-open by-pass. Without total reconstruction his theory could not be operated for water economy or with a normally closed by-pass.

The Bakersfield by-pass valve and gates were operated by a hydraulic cylinder in a manner very similar to that of defendant. The liquid actuating said hydraulic cylinder was controlled by a line to line valve bearing a close resemblance to that of defendant. In the Bakersfield device the centrifugal force of revolving weights form the speed sensitive element thus resembling defendant's fly balls. The by-pass valve and the main gates of this Bakersfield device were connected solidly together so as to work synchronously, the operation closely resembling that of defendant.

This Bakersfield governor achieved the general results and objects of the Lyndon patent much more closely than does the device of the defendant. The Bakersfield device effected governing without regard to water economy, there being a constant waste of water

through the half open by-pass under normal conditions of load and speed, closely resembling that of the Lyndon patent. The by-pass valve of Bakersfield installation shows a by-pass in the same sense as the Lyndon by-pass, *in that it operates inversely to the water-gate in both directions and at all times, its normal position being like that of Lyndon a half open position and not closed like defendant's device.*

It is not a sufficient answer to the disclosure of the Bakersfield device, that the Bakersfield governor *also acted as a load governor.*

While a device may be equivalent if it does more, it can never be an equivalent if it does less.

Engle Sanitary & Cremation Co. v. City of Ellwood, 73 Fed. 484, bottom of page 485-486.

The Bakersfield device accomplishes all that Lyndon sought to accomplish and more. It acted as a speed sensitive device as well as a load sensitive device. There is no result sought by Lyndon which was desirable which was not actually accomplished by said Bakersfield device. [See testimony of E. S. Cobb, Record, Vol. 2, page 593, Q. 58.]

Defendant does not contend that the Lyndon patent in suit is anticipated by Bakersfield, although the Bakersfield installation was pleaded as an anticipation in the answer of defendant, because,

(1) Under what we submit is the proper construction of the Lyndon claims, said claims must be confined to an *electromechanical* water-wheel governor, and the Bakersfield device is a purely mechanical governor. (*So also is defendant's governor.*)

(2) *We submit that the rule in Westinghouse v. Boyden* (170 U. S. 537) is properly applicable, because,

(a) While the letter of the claims may be read on the Bakersfield governor, the spirit cannot be so read. If construed as appellant seeks to construe these claims they are clearly anticipated by this Bakersfield installation. But construed in the light of and limited to the principle and mode of operation of the particular elements and correlation thereof shown and described by Mr. Lyndon these claims can be sustained, but when so construed it is equally clear defendant does not infringe.

By-Pass.

In defendant's device there is no "by-pass" for the water wheel within the sense of the Lyndon claims 6 and 7, or of Lyndon's theory. Lyndon clearly describes a device in which the by-pass valve is intended to be normally in a half open position, and is used to maintain a constant flow of water in the pipe line.

In defendant's device the auxiliary relief nozzle is *not normally in a half open position, but is normally closed or nearly so*, and its purpose is not to maintain a constant flow of water in the pipe line, but to protect the pipe line against extreme pressures. [See testimony of Mr. Henry, Record, Vol. 1, pages 349, 350, Q. 299; page 352, Q. 300; testimony of E. F. Scattergood, Record, Vol. 1, page 161, Q. 20-46; page 175, Q. 59-65; testimony of C. A. Heinze, Record, Vol. 1, pages 182-183, Q. 25-27; page 184, Q. 33.]

In defendant's device there is no "means connected to the water-gate-operating means and operating the by-pass valve inversely to the operation of the water-gate" as called for by claim 6, nor the "means connected to the water-gate-operating means and adapted to operate the by-pass valve from normal position in either direction", so as to control such valve inversely to the control of the water-gate, during the governing action of the water-gate, as called for by claim 7. Unless the means described are confined strictly to the device shown and disclosed in the Lyndon drawings for effecting the results sought, the claims as to this element are void as functional. The authorities heretofore cited with reference to the first element of each of the claims 6 and 7 are applicable.

If Lyndon's claims 6 and 7 are construed as covering *any and all means* for accomplishing the result of operating the by-pass valve inversely to the operation of the water-gate the claims are void as attempting to cover a function.

Drum v. Turner, 209 Fed. 854-856;

Eastern Dynamite Co. v. Eastern Powder Mfg. Co., 164 Fed. 47-58;

Queen & Co. v. Friedlander & Co., 149 Fed. 771.

The rule established in the United States Patent Office, by repeated decision of the Commissioner of Patents, shows the interpretation placed upon the Lyndon claims by the Patent Office while the Lyndon application was before it. Such rule is useful in determining the interpretation placed upon such claims *by the parties* at the time the patent contract was

negotiated. This rule may be illustrated by the decisions of the commissioner in the following cases:

In re Bullock, 127 O. G. 1580:

“Where the claim is not a combination of which the ‘means’ for the purpose mentioned is an element, but is merely for means as an element and covers all possible means for accomplishing a certain function regardless of structure, held: that the claim is indefinite and functional.”

In re Gardener, 140 O. G. 258, it was held that:

“It is well settled law that a patent cannot issue for a result sought to be accomplished by the inventor of a machine, but only for the mechanical means of instrumentalities by which that result is to be obtained. One cannot describe a machine which will perform a certain function itself and all other machines that may be invented by others to perform the same function.”

In *Woodward* 19 Gour. 73-20, (Sept. 1907) the commissioner held:

“Claims in which the only thing positively claimed is ‘means for straightening and holding the cross bars in the position stated are vague and indefinite since they attempt to cover all possible means for performing a certain function without any structural qualification as to character of the means’.”

The specific means illustrated in the Lyndon drawings and described in his specification should be read into his claims in order to avoid the necessity of construing them as functional.

General Sub-construction Co. v. Netcher, 167
Fed. 549.

All that has been said about the necessity for a strict construction, owing to the impracticability of the Lyndon device, the fact that it has never gone into commercial use; that no single specimen of the device has ever been made; and that the state of the art requires an extremely literal construction reading into the claims the precise means disclosed, applies with equal force to the means for operating the by-pass valve.

Means for Returning the By-Pass Valve.

In defendant's device there is no "means for returning the by-pass valve to normal position on completion of the governing movement of the water-gate-operating means".

Lyndon is not entitled to every possible kind of means that might be suggested for operating the water-gate in either direction. To construe the patent so broadly would be tantamount to granting Lyndon a monopoly on a function on the result rather than the means for performing that function or accomplishing that result in the manner and according to the principle suggested by him.

Plunger Elevator Co. v. Standard Elevator Co.,
153 Fed. 747;
Corrington *et al.* v. Westinghouse Air Brake
Co., 173 Fed. 69-78.

As said by the court in Weed Chain Tire Grip Co.
v. Excelsior Supply Co., 170 Fed. 232, at page 234:

“To the objection that the claims are functional, it may be said that claims for means for, or mechanism adapted to a certain result, and, like functional claims, are not objectionable *if limited to the invention shown by the specification and drawings. So narrowed* they are valid. Hobbs v. Beach, 180 U. S. 383; Paper Bag Case, 210 U. S. 405.” (Italics ours.)

See also,

Continental Automobile Co. v. A. G. Spaulding & Bros., 177 Fed. 693;

Hildreth v. Lauer & Sutter Co., 204 Fed. 792;

Monash Younkes Co. v. National Steam Specialty Co., 208 Fed. 559.

If claim 7 of the patent in suit is construed as embracing any and all means for accomplishing the result of returning the by-pass valve to normal position, the claim is void as covering a mere function. Such claim must be restricted to the devices shown and described by Lyndon, or to their mechanical equivalents. To be equivalents the substituted devices must perform the same function as the respective devices for which each is substituted and perform that function in substantially the same manner. The mode of operation must not be changed. The correlation of the parts must not be varied. *The idea of means* must not be departed from.

Robinson on Patents, Sec. 893, Vol. III.

As said by the court in American Pin Co. v. Oakville Co., 3 Blatchf. 190, Fed. Cas. 313:

“The rules thus laid down must govern this case. The patent does not secure to the patentee the result or effect produced, but only the means described by which the result or effect is produced. The means which he specifies to produce the result or effect are secured, and nothing more. *And all other means to produce the same result or effect, and not patented to any one, are open to the public.*” (Italics ours.)

The specific means illustrated in the Lyndon patent drawings and described in his specification should be read into the claims to avoid the necessity of holding them void as functional. Furthermore, such claims must be strictly construed because the Lyndon theory has never gone into use. The Lyndon invention never passed from mere theory to practical use. The *impracticability* of the Lyndon structure (even if we assume for the purpose of argument that the device is operative) would be sufficient to require a strict and literal construction, because, in

Wilson Trolley Catcher Co. v. Frank Ridlin Co.,
173 Fed. 308,

a broad claim based upon an impracticable, though operative structure construed, was held either to be so broad as to be invalid or limited to substantially the construction shown and described.

See also,

Severy Process Co. *et al.* v. Harper & Bros., 113
Fed. 581.

A patented device never used in an art should not be allowed to dominate the art.

Stromberg Motor Device Co. v. Parker, 204 Fed. 462;

Boston Woven Hose & Rubber Co. v. Pen Rubber Co., 164 Fed. 557.

Where the circumstances of the case require such a construction, courts do not hesitate to limit a patentee not only to the exact means described in the specification and illustrated in the drawing, but to the precise form of those means.

Singer Mfg. Co. v. Crammer, 192 U. S. 265.

To be the mechanical equivalent of Lyndon's means for returning the by-pass valve to normal position, defendant's mechanism must not only produce an analogous result, but must do so in substantially the same manner and by substantially the same means.

Imperial Bottle Cap and Machine Co. v. Crown Cork & Seal Co., 139 Fed. 312.

Mr. Henry is mistaken in pointing out the dash pot and its associated springs as the equivalent of Lyndon's means for returning the by-pass valve to normal position.

See Mr. Henry's testimony, Record, Vol. I, pages 222-3 (last paragraph of page 222).

Even reading a dash pot into the Lyndon devices to ease the descent of the weights (which it must be noted is not claimed as an element of said claim 7), the mechanism does not operate in the same manner as the device pointed out in defendant's structure. The object of the dash pot and springs of defendant's device is to introduce an elastic element between the

operating means and the stem of the auxiliary relief needle, which merely permits a certain slippage between the two parts. Upon a movement of the means operating the main needle of defendant's device, the main needle being rigidly connected thereto will move, *but this result is not necessarily followed by a movement of the relief nozzle needle.* If the movement of the main needle is not too sudden and violent when moved in either direction, or upon a movement of the main needle in an opening direction, the dash pot and springs of defendant's device will merely allow the parts to slip or slide upon one another, *and no inverse motion of the relief nozzle needle will follow.*

In Lyndon's device, once clutch 58-59 is operated by magnet 64, (*which must be effected whenever the main gate of Lyndon's moves*, whether it moves in an opening or closing direction) the by-pass valve will be positively operated and Lyndon's dash pot and weights do not permit any slippage.

In defendant's device the springs of the dash pot and the dash pot mechanism are in operation to prevent movement of the auxiliary needle as well as to cause such needle to move toward its normally closed position at all times, while in Lyndon's device the dash pot and weights permit of no elasticity or movement and can only be operated when the sheave 54 is moved far enough to break contact at 74-75, or when circuit is broken through magnet 64.

The primary purpose of the dash pot and springs of defendant's device is to permit the main needle to move many times without a corresponding movement of the

auxiliary needle and to prevent the auxiliary needle from leaving its closed or nearly closed position, and thus wasting water, while the weights of Lyndon are intended to do exactly the reverse, namely: to open by the by-pass so as to permit a constant waste of water. [See testimony of appellant's expert, Prof. Cory, Record, Vol. I, page 280, Q. 157-158.]

Prof. Cory, (the only other witness besides complainant), who attempted to point out mechanical equivalents between the patent in suit and defendant's device, exhibits extreme unfamiliarity with the operation of the dash pot and springs of defendant's device, and shows that his testimony cannot be relied upon. [See Record, Vol. I, pages 279-284, Q. 158-179.]

(Prof. Cory is coached and cross-examined by counsel for complainant in an effort to make him understand the operation of the device.)

Lyndon's Attempt to Prove an Earlier Date of Invention Than That of His Application.

Complainant has endeavored to antedate the French and Swiss patents by proving that Mr. Lyndon invented the subject matter of the Lyndon patent prior to the date of the French and Swiss patents. The burden is upon complainant to prove this fact, and the law is well settled that a mere preponderance of the evidence is not sufficient. On the contrary, such carrying back of the date of invention must be established by the same high degree of proof that is required to convict one charged with a criminal offense, namely: BEYOND A REASONABLE DOUBT.

Westinghouse Co. v. Saranac Co., 108 Fed. 222;
Michigan Cent. R. Co. v. Consolidated C. H.
Co., 67 Fed. 121, at page 129;
Wheaton v. Kendall, 85 Fed. 672;
Dey Time Register Co. v. W. H. Bundy Record-
ing Co., 178 Fed. 818;
Eck v. Kutz, 132 Fed. 763;
Thayer v. Hart, 20 Fed. 693;
Eagleton Mfg. Co. v. West Bradley & Cary
Mfg. Co., 2 Fed. Cas. 774, 777;
20th Century Co. v. Loew Co., 243 Fed. 373;
Lemly v. Dobson Evans Co., 243 Fed. 391;
Jackson Co. v. Adler, 243 Fed. 386, 389.

As said by the court in Westinghouse Co. v. Saranac Co. (*supra*):

“The patent being anticipated, if the date of the application be taken as the date of invention, the burden rests upon the complainant to satisfy the court that the invention was made at an earlier date. *There is no presumption in favor of such a patent.* The burden which rested upon the defendant in the first instance has been transferred to the complainant and it must furnish the court with convincing proof that the anticipation has been anticipated.” (*Italics ours.*)

Judge Hawley, in Wheaton v. Keldall (*supra*), quotes with approval from the opinion of Judge Coxe in Thayer v. Hart (*supra*), as follows:

“The evidence of prior invention is usually entirely within the control of the party asserting it, and so wide is the opportunity for deception, artifice, or mistake, that the authorities are almost

unanimous in holding that it must be established by proof clear, positive and unequivocal. Nothing must be left to speculation or conjecture.”

(See 85 Fed., last paragraph, page 672.)

The Court have come to recognize that testimony on behalf of complainants in patent cases which seeks to carry back the date of the invention of the patent in suit so as to antedate a proven defense is to be scrutinized with the same care as is evidence offered by defendant to prove the defense of prior use. The reason is the same. Therefore, the words of the Supreme Court in the Barbed Wire Case, 143 U. S. 275, although spoken directly with reference to evidence of prior use, may be applied equally to the attempt of appellant to antedate the French and Swiss patents. The court says:

“Indeed, the frequency with which the testimony is tortured or fabricated outright to build up the defense of a prior use of the thing patented, goes far to justify the popular impression that the inventor may be treated as the lawful prey of the infringer.”

The litigation over the Perlman demountable rim patent attests to the fraud often perpetrated by this class of testimony. In fact it has become common talk that in no class of litigation is there so much perjury as in patent cases where the patentee seeks to carry the date of completion of his invention back earlier than a prior patent or prior public use. In the Perlman case the patent was sustained in the first case,—by virtue of perjured testimony as to the dates when Perlman

conceived his invention and reduced it to practice. In the next subsequent case the same fraud was attempted but the defendant convinced the trial court that Perlman's testimony was utterly false. Fortunately the showing was sufficiently clear to result in a dismissal of the suit and the indictment of Perlman.

In the case at bar it is not clearly shown that Lyndon had in mind the precise mechanism he afterwards applied for a patent on. The Lyndon device is extremely complicated. It is undoubtedly true that Lyndon had in mind *some imperfect theory*; but it is thought that a consideration of the evidence will show that he had only the germ of an idea not fully developed, and had not conceived fully a complete device prior to the date of either the French or the Swiss patents.

In the case at bar there is no evidence of any actual building of an electromagnetic water-wheel governor by Mr. Lyndon at any time prior to his application for patent. There is no evidence that he ever "*completed*" the invention before his application for patent. There was no reduction to practice by him prior to his application for patent. The caveat filed by him was not a reduction to practice. It does not stand in law as a constructive reduction to practice. Under such circumstances the earliest date to which Mr. Lyndon is entitled is the date of filing of his application.

Automatic Weighing Machine Co. v. Pneumatic Scale Corporation, 166 Fed. 288 (C. C. A., 1st Cir.).

An examination of the claims of the Lyndon patent shows that each of such claims is for a combination

of interrelated elements. Appellant admits that separately considered every element is old and that the invention, if any, resides in the combination.

“If defendant omits one or more of the material elements which make up the combination he no longer uses the combination, and it is no answer to say that the omitted elements are not essential, and that the combination operates as well without as with them. *Leeds & Catlin v. Victor Talking Machine Co.*, 213 U. S. 301; *Evans et al. v. Hall Printing Press Co.*, 223 Fed. 539. It must also be established by one who alleges infringement of a combination that the entire combination as a (in) unitary structure, and having substantially the same mode of operation, is (and of) present (presence) in the alleged infringing machine. *Owens v. Twin City Separator Co.*, 168 Fed. 259. To make one mechanical device the equivalent of another it must appear not only that it produces the same effect, but that such effect is produced by substantially the same mode of operation.”

Wilson & Willard Mfg. Co. v. Union Tool Co.,
Case 2996, decided by this court Feb. 11, 1918,
—not yet reported.

The appellant rests his whole case of infringement upon his contention that the court may and will totally ignore the doctrine of equivalency and find infringement from the words of the claims disassociated from the electromagnetic water-wheel governor shown and described by Mr. Lyndon. “He contends that the word means is so broad in its scope that it embraces any mechanism that will accomplish the result claimed for his patent.” (Opinion of Judge Trippet, Record, Vol.

1, page 63.] “The complainant contends that the Lyndon patent in controversy is a primary and pioneer patent; *that it is so broad in scope and entitled to such broad interpretation that the claims therein may be read upon the structures of the defendant so as to show infringement regardless of the doctrine of equivalents.*” (Opinion of Judge Trippet, Record, page 62, —italics ours.)

Clearly under the evidence in this case, and in view of the theory of operation embodied by Mr. Lyndon in his conception of an electromagnetic water-wheel governor, defendant's device does not contain either *the identical elements* of any claim of the Lyndon patent or *the mechanical equivalents* of any claim thereof. It is for this reason that appellant asserts this novel but absurd proposition and asks the court to stretch the Lyndon patent to cover the function and effect of a water-wheel governor and not to limit such patent to the mechanism invented by Lyndon or the actual equivalents of such mechanism.

In appellant's brief reference is made to the settlement between the appellant and the Pelton Water-Wheel Company. This was a compromise of litigation pending between the parties. This is shown by the agreement entered into. The effect of such a compromise cannot be the same as the recognition of the Lyndon patent and invention and its adoption and use, as showing utility, etc. The litigation between appellant and said Pelton Water-Wheel Company involved many other things besides this Lyndon patent.

During the argument in the District Court appellant

made use of an exhibit which it entitled "*Lyndon compared with infringing structures.*" This chart totally destroyed the charge of infringement. We call Your Honors' particular attention thereto and to the following analysis of the claims of the Lyndon patent, in connection with such chart.

"Water-Gate-Operating Shaft."

(Claims 3, 4 and 8.)

First, what part is meant by Lyndon when he uses the term "water-gate-operating shaft"? A study of the context of the patent will show that in claims 3 and 4 Lyndon refers to the *shaft 12* as the water-gate-operating shaft. This is clear from the language of claim 3, "a returning device * * * provided with a clutch connection to said operating shaft". The only operating shaft mentioned in the claim is the water-gate-operating shaft, and the clutch connection of the so-called returning device is to the shaft 12. Therefore, the context shows beyond a doubt that Lyndon meant the shaft 12 when he used the term "water-gate-operating shaft." *The precise issue is then: does the rock shaft "A" of complainant's chart perform substantially the same function in substantially the same way and by substantially the same means as the shaft 12 of Lyndon?*

Shaft 12 of Lyndon is a revolving shaft which may positively revolve in both directions. Upon it, and forming a very important part of the mechanism of the Lyndon patent is the clutch connection 22-23, which upon rotation of the shaft throws in operation the alleged returning device, rod 25, and breaks contacts

through the different magnets. Shaft 12 thus performs three functions: (1), it moves the water-gate; (2), it moves the by-pass; (3), it positively actuates the so-called returning device to break contact through the various magnets controlling its own, as well as motion of other elements.

The rock shaft "A" is not the mechanical equivalent of shaft 12 of the Lyndon patent: (1), it is not a revolving shaft in the sense of the Lyndon patent; (2), it does not always move the valve of the relief nozzle when the main needle moves; (because of the intervention of the oil dash pot "I" on said chart which is designed expressly to *prevent* movement of the auxiliary needle except when the movement of the main needle is sudden and excessive, and only when the main needle is moving in a closing direction, the auxiliary needle being previously in its normally closed position); (3), *shaft "A" has no clutch connection operating any returning device—the so-called equivalent of the returning device, namely, the oil dash pot "D" of said chart is not located anywhere near the so-called water-gate-operating shaft "A". Unless all the elements intervening between the so-called water-gate-operating shaft "A" and the dash pot "B" are the equivalent of the clutch connection, disks 22-23 of the Lyndon patent, there is no clutch connection to said operating shaft, and consequently the element "A" does not perform all the functions of the shaft 12 of the Lyndon patent.*

“One thing to be the equivalent of another must perform the same function as that other; and while it can be an equivalent if it does more than that other, it cannot be such equivalent if it does less.”

Engle Sanitary & Cremation Company v. City of Ellwood, 73 Fed. 484, bottom of page 485-486.

Claim 8: In this claim the context of the patent clearly shows us that the element described as “the combination with a shaft for operating the water-gate in either direction from normal position” means shaft 20, because in the same claim we find the language “a clutch, adapted to connect said operating device for the by-pass valve *with the water-gate-operating shaft* to control the by-pass valve inversely to the water-gate”: This language could only refer to clutch 57-58, and as this clutch is on shaft 20 no other conclusion seems possible than that Lyndon meant shaft 20 in this instance by the language “a shaft for operating the water-gate in either direction.”

Shaft 20 differs from shaft “A” of said chart in that:—(1), shaft 20 is a revolving shaft while shaft “A” is only a rock shaft; (2), shaft 20 is attached directly to the clutch 57-58 through which it operates the by-pass valve, *while there is no clutch connected to shaft “A” at all.* The mode of operation and means of these two shafts differ radically.

“Means for Operating Same” (Water-Gate-Operating Shaft 12) “in Either Direction to Govern the Water-Wheel”, Claim 3; “A Reversing Clutch-Gear, Adapted to Turn the Water-Gate-Operating Shaft in Either Direction”, Claim 4; “Means for Operating the Water-Gate in Either Direction”, Claims 6 and 7; “Reversing Means for Operating the Water-Gate-Operating Shaft in Either Direction”, Claim 8.

These different quotations indicate the same element in the Lyndon structure, which is pointed out as finding its mechanical equivalent in the cylinder marked “B” of said chart.

The language of all these claims refers to the element known as the reversing clutch gear 9, 10 and 13. The hydraulic cylinder “B” is not a clutch gear; does not come within any of the definitions of a clutch gear; does not perform any of the functions of a clutch gear; cannot be substituted in any mechanism to perform any of the functions of a clutch gear; operates in a manner entirely different from a clutch gear. A hydraulic cylinder and a clutch connection or clutch-gear are about as different in physical appearance, functions, principles of operations and results, as any two simple mechanical elements might be.

Broadly the reversing clutch gear, 9, 10, 13 of the Lyndon patent, connects two shafts so that motion may be imparted from one revolving shaft to another. The hydraulic cylinder of defendant’s device does nothing of the kind.

The function of this clutch gear of the Lyndon patent is to connect the driving shaft 6 with the shaft 12 "in reverse driving relations." Complainant has pointed out the little shaft that rotates the fly balls of defendant's device as the mechanical equivalent of the driving shaft 6. [See marking on complainant's Exhibit Z-Z.] The alleged water-gate-operating shaft "A" of defendant's device is distinct from the alleged equivalent of the driving shaft. These two shafts are not connected in any "reverse driving relations."

The court should not lose sight of the fact that Mr. Henry pointed out not only this cylinder with its piston and piston rod, *but the valve which he has marked controller* on complainant's Exhibit Z-Z, namely, the line to line valve through which is regulated the flow of fluid under pressure to the cylinder "A", and a great many other elements down to the water-gate shaft. [Record, Vol. 1, page 322, Q. 219 *et seq.*]

Nothing could more conclusively show the weak analogy that exists between these elements than Mr. Henry's contradictions. It must also not be forgotten that Mr. Cory finally admits that this cylinder cannot even lead to a result analogous to the clutch gear of Lyndon without the addition of other elements. Even the elements suggested by Mr. Cory do not make the device perform the same functions of the Lyndon clutch gear.

No infringement exists because of the total absence of any equivalent of the reversing clutch gear or equivalent of the means for operating the water-gate in either direction, (which is concededly the same thing).

This element being common to all the claims, is not found in defendant's structure.

"A Controller for Said Operating Means, Responsive to Changes of Speed of the Water-Wheel", Claim 3; "A Controller, Responsive to Changes of Speed of the Water-Wheel and Controlling the Reversing-Gear", Claim 4; "A Controller, Responsive to the Speed of the Water-Wheel and Controlling Said Reversing Means". Claim 8.

These elements are pointed out in defendant's device as the line to line valve, marked "C," the only function of which is to permit the flow of fluid under pressure to one side or the other of the cylinder "B". It is a misnomer to call this valve a controller, because it is a mere passive element acted upon by the fly balls. When Mr. Cobb was asked to point out a controller in defendant's device, he very logically pointed out the fly balls. Here we have a good example of the fallacy of appellant's position.

Let us first determine, however, what the parties to this Lyndon patent contract, the government and Lyndon, meant when they used the word "controller". *The question is not what the court, the writer of this brief, or counsel for complainant might consider is properly designated by the term "controller,"* but the question is what did Lyndon and the government mean when they used the word in the patent specification and claims. It is believed that ninety-nine persons out of one hundred upon being asked to point out the "controller of the Lyndon device" if some other word were

substituted in the specification for the word "controller," would point out the dynamo 8, because that is surely the element which is intended to control the speed. It is true, also, that the solenoid 33 might without much abuse of language be called the "controller." *But Lyndon and the government did not designate either of these elements as the controller.*

The context of the specification clearly shows that lever 26 is the controller. Thus at line 25, page 2, Lyndon specification, it is said:

"The springs 27-28 enable the returning-rod 25 to exert pressure on the *controller 26* to return it to normal position, while permitting displacement of *such controller* from normal position under the action of its electromagnetic operating means."

Lyndon has nowhere in the patent in suit referred to any other element as the "controller"; although he has referred to the solenoid 33 as a controlling solenoid; and has also referred to the lever 26 as the "circuit controller" and "controlling lever."

Complainant has confusingly referred to the solenoid 33 as the controller, and when he points out the line to line valve marked "C" on the chart under consideration as a "controller" he means, (ignoring the plain language of the patent), that the element marked "C" is the equivalent of the solenoid 33. This confusion has resulted in *Mr. Henry's not pointing out any equivalent of the lever 26 at all.*

Briefly, the reasons why solenoid 33 cannot be considered the controller called for by the claims of the Lyndon patent are as follows: (1), Lyndon has no-

where referred to solenoid 33 as the controller; (2), Lyndon has expressly referred to lever 26 as the controller; (3), Lyndon in some of his claims, notably claim 9, has claimed "an electromagnetic device connected to said dynamo," namely, solenoid 33, and said "controller," the lever 26 as separate elements, thereby distinguishing them and showing that there was no intention that they should be confused.

In claim 5 the controller 26 is referred to as a "circuit controller" and is claimed as a separate element from the solenoid 33 which is referred to as a "solenoid device."

The question we must discuss, therefore, is as to the equivalence of the lever 26 with the line to line valve marked "C" on said chart.

The two devices are not mechanical equivalents because their functions are entirely dissimilar. The working part of this valve "C" responds directly to the centrifugal force of the fly balls and operates merely to permit the flow of fluid under pressure to one side or the other of a hydraulic cylinder. The element, lever 26, of the Lyndon patent is merely a double lever, which, under the control of a solenoid core, makes and breaks electrical contacts. The power is generated by the dynamo 8 of Lyndon which in function and result bears an analogy to the power fluid which operates the piston of the cylinder "B" of said chart, *but in defendant's device such power fluid or the force exerted by it is not the centrifugal force of the fly balls, but comes from an entirely different source, i. e., from a tank in which it is pumped under pressure.*

If said line to line valve "C" is to be considered as the controller 26 of Lyndon, *where is the equivalent of the solenoid 33 in defendant's device?* If the line to line valve "C" is the equivalent of solenoid 33, *where is the equivalent of the controller 26?*

If the court is in doubt as to whether any analogy that might exist between the line to line valve "C" and controller 26 of the Lyndon patent is sufficient to make these elements equivalents in the technical sense, it seems that the court should be guided by the testimony of the experts *especially when those experts agree.*

Mr. Henry agrees with defendant that the line to line valve "C" is not the equivalent of lever 26 by not pointing it out *as such* equivalent, *but insisting that it is the equivalent of solenoid 33.*

"A Returning Device for Said Controller Provided With a Clutch Connection to Said Operating-Shaft", Claim 3; "A Returning Device for Said Controller", Claim 4.

Complainant points out a part marked "D-D" on said chart as equivalent of the above described element of Lyndon. We are met with considerable difficulty in replying to this assertion of alleged equivalency for the reason that it does not distinctly appear just what part or parts are to be included in the alleged equivalent. The line extending from the letter "D-D" appears to point out only the rack and pinion and piston of the dash pot of the construction marked "Division Creek," while in the copy furnished the writer of this brief by complainant the construction marked "Cottonwood" is

indecipherable. This difficulty not knowing exactly what complainant means is not a matter of small consequence: each and every mechanical part adjacent and connected to the rack and pinion, the dash pot and the means for regulating the flow from one side to the other, have some function in the mechanism. In order to compare functions we must know precisely what parts to compare before we can determine the question of equivalency or lack thereof. Complainant has marked the rod or part at one end of the dash pot with the letter "E" to signify that it alone or some of its connecting parts were equivalent of "means actuated by said controller, etc." (claims 3 and 4). This is a separate element in the claims, and it must be presumed that the parts intended to be marked "E" are not included in the parts marked "D-D".

We are, therefore, driven to "guess" that the rack and pinion and the dash pot, its casing, piston, and piston rod are intended by complainant to be included in his "returning device." In making this surmise, however, we are burdened with the recollection that Mr. Henry has distinctly pointed out this same piston rod and cylinder case as the equivalent of a "clutch connection". *We should not be compelled to guess because the burden is upon complainant to point out equivalents so clearly that the court can have no doubt.*

We feel that we are justified in assuming, in making this comparison, that when complainant uses the term "returning device" he means "returning device" in its broadest sense as including the alleged equivalent of the clutch. Possibly counsel would also wish to in-

clude the spring and finger connections just below the rack and pinion. In order to make some kind of an intelligible answer to the question let us so assume,—because manifestly these spring and finger parts just below the rack and pinion are very necessary to its operation. Our recollection, however, which may be verified by reference to Exhibit Z-Z is that Mr. Henry also includes “connections to the fly balls”, that is, the rod on which the pinion is mounted, as part of the returning device. Our only thorough way to answer the question is to consider all and every part of this combination of elements—considering its functions and results and means of operation. Here again we must remind the court that the fact that the broad and vague descriptive term “returning device” might describe some part or all of this combination of elements determines nothing. We must find out what Lyndon meant in his patent specification and claims when he used the term “returning device” and must compare *not a name merely, but a mechanism with its mode of operation, its precise means and finally its function and result.*

There is some confusion in the Lyndon patent as to just what part is included in the “returning device”. At line 12, page 2, appears the following:

“A returning device consisting of a rod 25, connected by a pivoted link or connecting rod 25a with the disk 22, passing through a hole in the controller lever 26, pivoted at 26a to a fixed support, * * *”.

This would seem to imply that rod 25 is the returning device. This construction is also supported by the

fact that in claim 5 an element called the "returning device" is claimed as a separate element from its clutch 22 and 23. Magnet 32 cannot be included in the returning device because it is distinctly claimed as a separate element "means actuated by said controller".

It seems to say that rod 25 alone centered by springs is the returning device of the Lyndon patent, although if disks 22 and 23 are included therein, it is not seen that it will make much difference so far as comparisons are concerned. It is obvious that the returning device and its actuating means must be severed for the purpose of comparison, and also the clutch connection of or for the returning device must be pointed out or the limitations of the claims are not complied with.

This so called returning device is merely a rod centered by springs attached at one end to the disk of a clutch. It has only a short longitudinal movement, and its function is to break the circuits established by controller 26.

The language of claim 3 is "a returning device provided with a clutch connection to said operating shaft". What operating shaft? *The water-gate-operating shaft*. Now the water-gate-operating shaft has been pointed out as the rock shaft "A" of the chart under consideration in this brief, and surely neither the dash pot, the means for regulating its flow from one side of the piston to the other, the rack, nor the pinion can be described as located anywhere near the alleged equivalent of the water-gate-operating shaft.

The wildest kind of imagination is not sufficient to conceive any of the parts under discussion as being a clutch connection to the operating shaft.

None of the parts mentioned bear the slightest analogy to the means or mode of operation of the alleged returning device of the Lyndon patent. The dash pot with its cylinder and piston is not a clutch connection, and cannot be substituted in any mechanism to perform the function of a clutch connection. It connects no shafts. *It has absolutely nothing to do with either the alleged equivalent of the driving shaft or the water-gate-operating shaft, or any other shaft.*

The function of the said dash pot of defendant's device is to allow the end of the rack furthest from the dash pot and the end of the piston rod furthest from the dash pot to alter their points of separation. In operation it is very closely analogous to a block of rubber placed between the ends of two shafts which by compression will shorten the total length of the construction and which by its elasticity will allow the two shafts to be further separated. The dash pot has no other function.

That all this mechanism, or parts of this mechanism, was intended for a purpose very analogous to that of Lyndon's rod 25 is beside the point. The two devices are as different from each other as might be possible.

The parts indicated by the letter "E" as "means connected by the controller to engage said clutch with said shaft" surely reached the limit for absurd comparisons. What clutch and what shaft? "Engage" is a word of very definite meaning, and how can it properly

be applied to a relation with the shaft marked "A" and indicated as an alleged equivalent of the water-gate-operating shaft?

"Means, Actuated by Said Controller on Movement Thereof From Normal Position to Engage Such Clutch With Said Shaft", Claim 3; "Actuating Means Controlled by Said Controlling Means", Claim 4.

This language refers clearly mainly to magnet 32 as well, perhaps, as some of the means by which its energization is effected. When energized this magnet 32 performs the simple function of, by attracting its armature, throwing lever which operates a clutch connection.

The parts evidently intended by the letter "F" on the chart under consideration, *merely operate to vary the flow of oil from one side of a dash pot to the other*. How that can properly be called "actuating means" is surely beyond comprehension. There are two "actuating means" in the governor mechanism of defendant: (1), the fly balls; (2), the power fluid under pressure. The means which cause movement of the dash pot is the piston rod of the cylinder "B" and the parts pointed out by "E" clearly only govern the quality and variability of movement of the rack and pinion.

The writer sees no way of further answering the question except to reiterate that the means for varying the flow of oil from one side of a dash pot to another *which do not initiate any movement* surely cannot properly be called "actuating means" in any sense and surely not in the sense of the Lyndon patent.

“Driving Shaft.”

It is rather amazing to have counsel point out the shaft marked “F” on the chart in question as the driving shaft. If there is any evidence in the record of any witness who pointed out this shaft as a driving shaft, we earnestly suggest that the court request counsel to state where. *Mr. Henry distinctly and positively pointed out the shaft which operates the fly balls as the equivalent of the driving shaft of the Lyndon patent.* [See complainant’s Exhibit Z-Z, where Mr. Henry’s marking plainly appears.]

It is believed that this contradiction by counsel of complainant’s testimony as an expert should be construed strongly against him. This is the first notice that defendant has had that complainant wishes to shift his position with regard to the driving shaft.

The long rod that connects the double lever which is connected directly to the shaft “A” and the link connected to the shaft “F” might with as much reason be termed a driving shaft.

Defendant’s witnesses refer to the main shaft of the water-wheel of defendant’s device as a driving shaft. Many other straight members might possibly be called driving shafts.

The element of the Lyndon patent referred to as driving shaft is clearly the shaft 6. This is admitted by Mr. Henry, [Record, Vol. 1, page 321, Q. 214]. It is also obvious from a study of the context of the patent, as some of the claims call for both a water-gate-operating shaft and a driving shaft connected by a clutch gear in reverse driving relations, or words to

that effect. We have seen that the context of the patent is such as to compel the conclusion that shaft 12 in most of the claims, at least, is the water-gate-operating shaft. These two shafts are connected by the reversing clutch gear, an element which we have seen is not found in defendant's device.

Complainant attempts to read the cylinder "B" as the reversing clutch gear. This cylinder "B" does not connect shafts "F" and "A" in reverse driving relations. Both of these shafts are merely rock shafts,—that do not revolve like the Lyndon shafts. When they move through their very limited arc of movement *they move in the same direction.*

The driving shaft of Lyndon performs two functions:—(1), it forms one of the shafts through which the dynamo is energized; (2), it forms one of the means through which the water-gate and by-pass valve are moved.

The new alleged equivalent of this driving shaft, namely, "F" of said chart, *has no connection whatever with the alleged equivalent of the dynamo, namely, the fly balls.* This shaft "F", therefore, clearly does not perform the function of the shaft 6 of the Lyndon patent, and is therefore not its mechanical equivalent.

**“A Valve Controlling Said By-Pass” of Claim 6;
“A Valve for Said By-Pass”, Claim 7; “A Valve
for Such By-Pass Normally Held in Partly-
Open Position”, Claim 8.**

Lyndon shows a butterfly valve, and the part “G” is a needle nozzle. Defendant’s needle nozzle should not be considered the equivalent of Lyndon’s butterfly valve, because of the difference in mode of operation and result. Defendant’s nozzle is normally closed, thereby economizing water; Lyndon’s valve is normally half open. Defendant’s nozzle is a safety device intended to protect the pipe line from excessive pressures; Lyndon’s valve was intended to maintain the velocity of the water projected against the wheel uniform, for governing purposes only. Defendant’s main needle moves many times to govern the water-wheel without a corresponding inverse movement of the auxiliary nozzle. This is because the auxiliary nozzle is designed only to operate upon extreme fluctuations of load resulting in dangerous pressures. Lyndon was struggling with a different problem.

Defendant can safely disregard the inertia effects which interfere with proper governing because of the peculiar conditions of the pipe line,—a steep pipe line, which permits water to accelerate quickly and thus makes any lag of the water when the main gate is opened negligible. Mr. Lyndon was evidently considering only pipe lines which were not so steep—in which the velocity of the water was not so great. He was not trying to solve the problem defendant’s device provides for. It is thus a different principle of operation

and the distinction that defendant's auxiliary nozzle is normally closed becomes of great importance, for it indicates a different principle of operation.

Even the letter of claims 6 and 7, therefore, does not read on defendant's construction for the movements of the main and auxiliary nozzles cannot be inverse in both directions at all times, as plainly contemplated by Lyndon. The butterfly valve is a very old form of valve. It is supplanted in defendant's device with this needle nozzle. It does not operate in the same manner.

“Means Connected to the Water-Gate-Operating Means and Operating the By-Pass Valve Inversely to the Operation of the Water-Gate”, Claim 6; “Means Connected to the Water-Gate-Operating Means and Adapted to Operate the By-Pass Valve From Normal Position in Either Direction, So as to Control Such Valve Inversely to the Control of the Water-Gate, During the Governing Action of the Water-Gate”, Claim 7.

Complainant has also marked with the letter H on said chart the element of claim 8 described as “means operated by said controller to bring the aforesaid clutch” (clutch 57 and 58) “into operation and to release said clutch when the governing action is effected.”

The inclusion of this last described element under the designation “H” is another glaring example of the confusion, accidental or otherwise, which complainant is constantly injecting into this case. The “means” last referred to of claim 8 clearly indicate *compen-*

sating magnet 64. It is obvious that the part marked "H" on the chart under consideration bears no analogy whatever to the magnet 64. Its further consideration would be foolish.

Referring to the language of claims 6 and 7 above quoted, and leaving out of consideration the last named element of claim 8, we find that the language of the claims clearly refers to the sheave 54 with its associated mechanism, including the ropes to the stem of the by-pass valve 48 of Lyndon, but does not include the weights 70, because they are claimed as a separate element, i. e., "means for returning the by-pass valve to normal position."

The difference as a "means" of the part marked "H" on the chart under consideration and the parts referred to in the Lyndon patent is very glaring. The manner in which the sheave wheel and ropes open and close the by-pass valve, and in which it is prevented from further operation by breaking of a contact shows not only different means for effecting an analogous result, but a totally different method of operation.

We have shown that the part marked "A" is not the equivalent of the water-gate-operating shaft of the Lyndon patent; it follows that this double lever marked "H" is not connected to any water-gate-operating means within the meaning of the Lyndon patent.

Moreover, this part "H" does not operate any by-pass valve inversely to the operation of the water-gate *at all times* in the sense of the Lyndon patent, because *owing to the intervention of the dash pot marked "I" on said chart (which is shown on argument to be de-*

signed to permit movement of the main needle without a corresponding movement of the auxiliary needle) the main needle may always move in an opening direction without any movement of the auxiliary needle because such needle is normally closed. and upon a slight movement of the main needle in either direction there is no inverse effect communicated to the auxiliary needle. This is because of the intervention of this dash pot, which is especially designated to secure this effect, and the fact that this effect was found desirable and was provided for conclusively shows a different principle of operation from the Lyndon device.

The language of this claim must of course be read in the light of the specification, and its spirit must be considered as well as its letter. Merely because the auxiliary needle may, while off its seat, happen during a quick series of governing movements to be operated momentarily inversely to the auxiliary needle, does not mean that the two devices are similar in principle or in effect.

Counsel's insistence upon some of the testimony to the effect that when a series of extreme fluctuations of load occur upon the use of a dredge, or for other reasons, that the auxiliary nozzle would leave its seat, and while the auxiliary needle was slowly returning to normal position, there might be a further opening movement of the main needle, is merely a laborious effort to turn a mere superficial and incidental resemblance at certain periods only, and which is not an operation in accordance with Lyndon's theory, into a similarity in principle.

It is also obvious that the change in form from the butterfly valve of Lyndon to the needle nozzle of defendant involves the use of widely different means.

There has been a strenuous attempt on the part of complainant to reinvent the Lyndon device *so that its by-pass valve could be normally closed*. This cannot be done without departing from the principle of the Lyndon invention, because when we close Lyndon's by-pass we must readjust our circuits, thus rendering much of the mechanism of the Lyndon device useless, and abandoning Lyndon's *express intention of overcoming inertia effects in both opening and closing directions*.

"A Clutch, Adapted to Connect Said Operating Device for the By-Pass Valve With the Water-Gate-Operating Shaft to Control the By-Pass Valve Inversely to the Water-Gate", Claim 8.

Our argument with respect to the dash pot marked "D" on the chart under consideration, that a dash pot is not a clutch, may be here repeated. This dash pot "I" operates exactly like that at "D" in allowing the ends of the shaft protruding from it to become nearer or further apart, that is to say, if we took out this dash pot and put in a block of soft rubber we would have a very close analogy because the rubber might compress or stretch, thus enabling the needle and the furthest end of the shaft marked "J" to be moved further apart or nearer together. How such dash pot can be likened to a "clutch" is difficult to understand. It is clearly not a clutch; it does not perform

any of the functions of the clutch. There are no two simple devices which are more dissimilar in their purposes and mode of operation. Moreover, the precise language of the claim calls for a "clutch adapted to connect said operating device for the by-pass valve" (sheave 54, etc.) with the water-gate-operating shaft. This language clearly referring to the clutch shows that a positive connection of the clutch to the shaft is contemplated. Assuming for the sake of argument that "A" of the chart under discussion is the water-gate-operating shaft as pointed out by complainant, (though we have shown clearly that it cannot be so maintained), *this dash pot does not connect any operating device (which operating device is pointed out as the short shaft "J") with the water-gate-operating shaft.*

"An Operating Device for Said Valve", (By-Pass Valve), Claim 8.

This language of claim 8 refers clearly to the sheave 54 and ropes of the by-pass valve. If complainant had been consistent, and regarded the plain meaning of the claim he would have marked this element H instead of J. All we can say is that this little piece of shaft J bears no analogy to the sheave 54 and ropes. *This is a good illustration, however, of the ease with which the descriptive terms of the claims can be applied to most any kind of a mechanism.*

Counsel points out the double lever marked H as the equivalent of this operating device as to some of the claims, but shifts to this little piece of shaft as to claim 8 without any regard for consistency. In doing this,

however, he overlooks entirely the part of the claim reading “a clutch adapted to connect *said operating device for the by-pass valve with the water-gate-operating shaft*”.

If A is the water-gate-operating shaft as contended for by complainant, I the clutch and J the operating device, it is clear that the so called equivalent of the clutch does not connect the so called equivalent of the operating device with the water-gate-operating shaft.

“Means for Returning the Valve to Normal Position”, Claim 8.

In the Lyndon patent in suit, this language refers obviously to the weights 70 which tend always to bring the Lyndon by-pass valve back to its normal half open position. If in the process of governing the Lyndon by-pass valve closes, these weights 70 are designed and their relation with the other parts of the mechanism is such as to cause the Lyndon by-pass valve to move to its half open position. The tendency of the springs indicated by the letter K of complainant's chart is to always close the auxiliary needle, and there is nothing to prevent it from doing this. This auxiliary needle will always close, after governing movement, thus economizing water, while Lyndon's by-pass operating on a different principle, will always return to half open position. This distinction is fundamental. Lyndon's alleged invention related to a device which accomplished governing regardless of water economy, and with a constant waste of water. It was necessary to

allow this waste in order to overcome the inertia effects *detrimental to governing in both directions.*

Lyndon's problem related to water flowing through a pipe line at a low velocity. He did not attack the problem nor see the importance of the problem, of economizing so as to conserve water. The pipe lines that Lyndon had in contemplation were not steep, and water did not flow with sufficient velocity to make it unnecessary to regard the inertia effects upon moving of the water-gate in an opening direction. In the conditions controlling the device used by the defendant the great problem was to overcome only dangerous inertia effects, dangerous to the safety of the pipe line, caused by a too rapid closure of the main needle. Lyndon never thought of inertia effects dangerous to the pipe line. This difference in normal position of Lyndon's by-pass and the auxiliary relief nozzle needle of defendant shows a new principle, a new law of operation, and is therefore a vital difference. and if there were no other difference in the whole case—if the mechanism were very closely analogous, if defendant used the same electromechanical devices, *this difference in principle would avoid the charge of infringement.*

Defendant's springs do not, therefore, perform the same function as Lyndon's weights.

“A By-Pass Valve for the Water-Wheel”, Claims 6, 7 and 8.

We have constantly reiterated a warning against the danger of falling into the fallacy of supposing that

things to which the same descriptive language might apply were the same. It must be borne in mind that the by-pass of the Lyndon claims is the by-pass of his description and drawings, namely: *a by-pass in a normally half open position*, allowing a constant waste of water for the purpose of overcoming inertia effects *detrimental to governing in both directions*. Defendant does not use such a by-pass and does not regard the natural law forming the basis of Lyndon's alleged invention, for the reason that another natural law has neutralized the effect of the first, namely: the law of gravitation operating through a steep pipe line increasing the velocity of the water has made it possible for defendant to disregard Lyndon's theory. The court should not, therefore, permit the function of the opening of this safety nozzle to protect the pipe line against excessive pressures to be mistaken for the functions of Lyndon's by-pass.

We have constantly emphasized the law that the omission of but one element of a combination claim by a defendant, will defeat a charge of infringement. We have clearly established that not only one but many elements have been omitted from defendant's device; that the principle of the device of defendant's device is different from complainant's, and that the entire assembly, kind and arrangement of means for effecting the result is different. This required a finding of non-infringement.

In considering the indefinite language of claims 6 and 7 "*means for operating the water-gate in either*

direction"; (clutch gear 9, 10, 13); "*means* for operating the by-pass valve inversely to the operation of the water gate" (sheave 54 and connections); "*means* for returning the by-pass valve to normal position" (weights 70) it is very important for the court to remember that this apparent looseness of language does not warrant its being construed to cover every *means*, but only those shown in the patent or their mechanical equivalents.

In determining whether the defendant's device infringes the Lyndon by utilizing the Lyndon combination as expressed in any one or all of the claims, the court must look at the element going to make up defendant's device, and how they co-operate to perform their respective functions. We are considering things, not mere words. This shows the glaring error of appellant's position, which position is clearly stated on page 15 of appellant's brief, in italics:

"The defendant's structures fall within the clear language of the broad claims of the patent in suit, and even the terminology of the narrower claims finds its equivalent expression in defendant's structures."

"Language", "terminology", words, not things, are what appellant is harping upon,—what he compares. But as said by Circuit Judge Hough, in *Linde Air Products Co. v. Morse Dry Dock & Repair Co.*, (246 Fed. 834, C. C. A. 2nd Cir.):

"There is no magic in a name, nor in a claim; that the words preferred by a patentee to define

his invention apply literally to another's device suggests, but does not prove, infringement; there must be substantial identity, to justify that conclusion of law. *Edison v. American Co.*, 151 Fed. 787, 81 C. C. A. 391."

Justice Clifford, in *Bates v. Coe*, 98 U. S. 68, says:

"Devices in one machine may be called by the same name as those contained in another, and yet they may be quite unlike, in the sense of the patent law, in a case where those in one of the machines perform different functions from those in the other. In determining about similarities and differences, courts of justice are not governed merely by the names of things; but look at the machines and their devices in the light of what they do or what office or function they perform, and how they perform it, and find that a thing is substantially the same as another, if it performs substantially the same function or office in substantially the same way to obtain substantially the same result; *and that devices are substantially different when they perform different duties in a substantially different way, or produce substantially a different result.*

Cahoon v. Ring, 1 Cliff. 620." (Italics ours.)

The decree of the District Court was right and should be affirmed. The facts of the case fully support the conclusion of the District Court:

"If the defendant's device was manifestly a copy of the complainant's machine with the exception that the defendant had substituted a dashpot for a solenoid, or a dashpot for a reversible clutch gear, or a needle valve in the by-pass for a butterfly valve, in order to avoid infringement, the court might well look with more

favor on the claim that such elements should be regarded as equivalents. But where it is manifest that the whole conception of the alleged infringing device, and all its elements, are different, and where the machines are intended to operate on a different principle, the court could not decide such things to be equivalents without doing violence to the rule of law on the subject.

The complainant has not sustained the claim of infringement." [Record, Vol. I, page 72.]

Respectfully submitted,

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